GENERAL VIEW

OF THE

AGRICULTURE

OF THE

COUNTY OF BERWICK.

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GENERAL VIEW

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AGRICULTURE

OF THE

COUNTY OF BERWICK,

WITH

OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT.

BY ALEXANDER LOWE.

DRAWN UP FOR THE CONSIDERATION OF

THE BOARD OF AGRICULTURE AND INTERNAL IMPROVEMENT.

R. Academies &c

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TO THE READER.

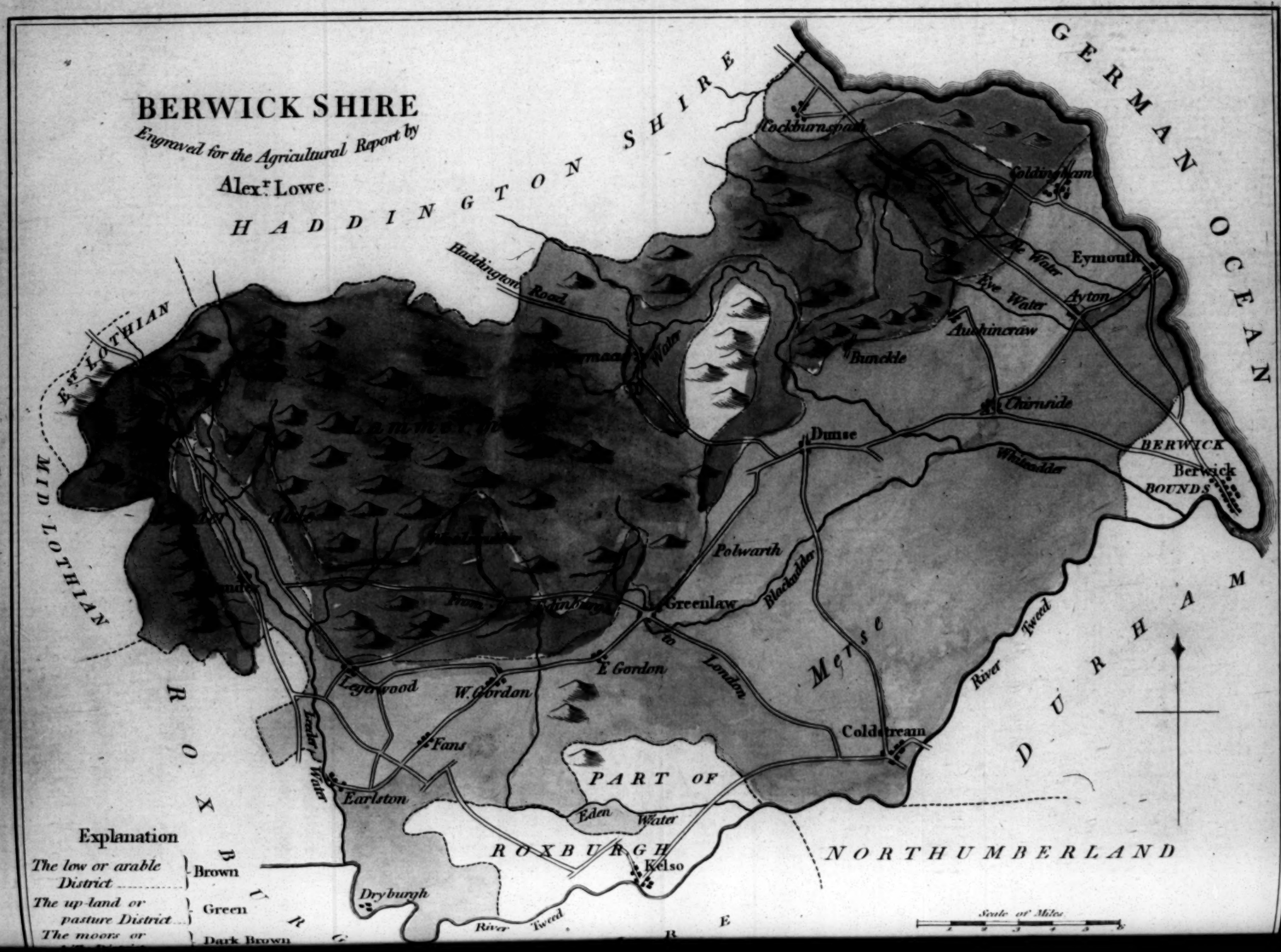
IT is requested that this paper may be returned to the Board of Agriculture, at its Office in London, with any additional Remarks and Observations which may occur on the perusal, written on the Margin, *as soon as may be convenient.*

It is hardly necessary to add, that the Board does not consider itself responsible for any fact or observation contained in this Report, which, at present, is printed and circulated for the purpose merely of procuring farther information respecting the Husbandry of this District, and of enabling every one to contribute his mite to the improvement of the country.

The Board has adopted the same plan in regard to all the other Counties in the United Kingdom; and will be happy to give every assistance in its power, to any person who may be desirous of improving his breed of Cattle, Sheep, &c. or of trying any useful Experiment in Husbandry.

London, July 1794.

TO THE READER.


BERWICK SHIRE
Engraved for the Agricultural Report by
Alex.r Lowe.
HADDINGTON SHIRE
GERMAN OCEAN
Cockburnspath
Coldingham
Eymouth
Ale Water
Eye Water
Ayton
Auchincraw
Bunckle
Chirnside
Dunse
Whiteadder
BERWICK
Berwick
BOUNDS
Haddington Road
Water
Polwarth
Blackadder
Greenlaw
to London
Merse
River Tweed
DURHAM
E Gordon
W. Gordon
Legerwood
Fans
Leeder Water
Earlston
Coldstream
PART OF
Eden Water
ROXBURGH
Kelso
NORTHUMBERLAND
Dryburgh
River Tweed
MID LOTHIAN
ROXBURGH
Explanation
The low or arable District — Brown
The up-land or pasture District — Green
The moors or — Dark Brown
Scale of Miles

COUNTY OF BERWICK.

INTRODUCTION.

THE county of Berwick is the district of Scotland situated on the German Ocean, immediately north-west of the river Tweed and Berwick bounds, bounded by the said ocean on the north-east, by Berwick bounds, the Tweed, and part of Roxburghshire on the south-east and south, by Roxburghshire and Mid-Lothian on the west and south-west, and by Mid-Lothian on the north-west, being in form an irregular sided parrallelogram. The mean extent from north-east to south-west is about twenty-four miles, and from south-east to north-west nearly eighteen. The greatest length is twenty-seven miles and a half, and the greatest breadth nineteen and a half. It contains something more than 431 square miles, or 276,000 English acres, thirty-two parishes, and part of a thirty-third, which part has the name of Pendicles; one royal burgh, and several burghs of barony, commonly called towns or villages. The largest and most considerable is Dunse. Greenlaw is the county town, where the courts are held; and Eymouth is the only port for shipping; but a great part of the produce of the county, chiefly grain, wool, salmon, pork and eggs, is shipped at Berwick.

There are several small rivers and rivulets, which have their source in the hills of Lammermoor, and after winding through the county in a variety of directions, empty themselves one into another, and at last fall into the German Ocean or the river Tweed. The most considerable of these

streams

streams are the Whitater, Blackater, Leeder, Eye and Dye, all abounding with trout, and some of them with pike and perch. The Tweed abounds with excellent salmon, and trout of all kinds.

The soils in the county are various, from the strongest stubborn clay, through all the classes mentioned by the writers of the county, to the most barren moors and moss. The arable lands are generally of a reddish colour.

To give a more distinct idea of this variety, and of the situation of the county, it may be proper to mention the division or description most generally known in it when improvements in agriculture were in their infancy: the names of these divisions are still retained.

The county, in the language of it, is divided into two districts, the Merse and Lammermoor, to which is added a third, or Lauderdale. The first extends from the Tweed to the foot of the hills or edges of Lammermoor, over a tract of from three to nine miles in breadth, which, when viewed from the hills on the edges of Lammermoor, has the appearance of an extensive plain, terminated by some high grounds on the north-east and south-west parts; though on the whole, the surface is waved into rising and falling ground. This district of the county was divided by name and quality into infield, outfield, moor, meadow or bog, and moss. The infield was a small portion of lands of the best quality near the farm onsteads, set apart to receive all the dung made on the farm, and to continue in tillage or crop under the rotation and succession of wheat, pease, barley, oats, fallow. The outfield far exceeded the infield in quantity and variety; a third part of it was allowed to be under crop; after being folded, or manured with lime, it carried three or four crops of oats, and thereafter was left to rest without being sown with grass-seeds. The third class, being moor, was held to be of very little use; a few bad sheep generally pastured on it in summer. The fourth class, meadow or bog, was and is

still

still considered of value, where it carries a weighty crop of coarse hay, fit for wintering lean cattle, or affording a coarse pasture for young cattle in the summer. The fifth class, which abounds most in the western parts of the district, affords an inexhaustible fund of peat for fuel.

Lammermoor is a hilly and high tract of country, stretching from near a bold coast on the north-east to Lauderdale, and the marches of the high lands of Mid-Lothian on the south-west. The tops of the hills which first strike the eye, being covered with heath, give a barren appearance to the whole tract, though at the foot of the hills, and along the rivulet sides, there is a great deal of dry sharp improvable soil, well adapted for the turnip husbandry; and on the Dye and Whitater there has been very great improvements made by liming, inclosing, &c.

Lauderdale is that tract of the county on both sides of Leeder water, rising from the said water to the heights of Lammermoor on the one hand, and to the heights of the Lothians on the other. The division or classes of soil in these two districts are the same as in the Merse in name, but not in a proportionate quantity.

It would much gratify curiosity, could we ascertain the extent of the different classes at the period to which we now allude, being from thirty to forty years ago, and compare that extent with what it is now, as we would thereby have a distinct view of one of the improvements to be afterwards mentioned, viz. converting moors into arable land, which has been done in this county to the extent of many thousand acres.

The example of improving by inclosing, marling, liming, &c. having been given in the county by many gentlemen and farmers, the advantages were seen by all who were devoid of prejudice, and the example was followed as fast as circumstances would allow: the commons, or run-rig lands, were divided; the farms laid off in greater size; new farm steadings

were built; tenants possessed of stock, were sought for and encouraged by the gentlemen, many of whom had improved their estates, but found that they could not carry on the farming of them afterwards to advantage, except in situations in which the nature of the soil, and the sufficiency of the fences, would allow the fields to remain in grass; a communication was opened up to England and Edinburgh by the beautiful bridge of Coldstream, and the post-road therewith connected:—all these circumstances, and others, combined to put the county in a fair way of improvement. It has undergone a very rapid one of late, and is likely to go on.

From the best calculation that can be made, without an actual survey, it is supposed that the lower district of the county, connecting with it some of the banks of the Whitater, the Leeder and Eye, and the lower part of the parish of Cockburnspath, may contain 125,000 acres, of which there is less than the half, or about 50,000 acres, in tillage; the rest of the district being in pasture, bog, moor, wood and moss.

The other districts contain 151,000 acres, of which it is supposed there may be about,

Arable in tillage - - -	25,000
Arable and green pasture - -	75,000
Moor and moss, and wood - -	51,000
	151,000

The soil in the lower district is in many places wet and heavy, the greater part inclined to clay; much of the lands brought from moor is mossy and spungy at top, and has what is called muirband at bottom, which retains water. Along the burn sides, and round some of the bottoms of the hills in the high district, there is also some clay with a mixture of gravel, but the major part is a mixture of sandy or gravelly soil; and on the whole, it is better calculated for the turnip husbandry than the lower district, were it not that the climate is much more unfavourable, on account of being wetter,

wetter, exposed much more to storms of snow, and a longer continuance of severe frosts. The county is held to be wet from above, when compared with other districts on the German Ocean, namely, the Lothians.

Along the Tweed, and the few low parts of the coast, the climate is mild; but as the traveller advances north-west through the county, near the centre of it, in the beginning or breaking of a storm he will perceive the air to be colder at the end of every mile he travels, and no wonder, for before he advance far up Langton edges, he is near 1000 feet above the sea, and it takes nearly 300 more of elevation to carry him over the hills; besides, these hills form part of a high ridge that stretches from sea to sea, over which a strong cool breeze often falls. Those on the one side attract the clouds, while Cheviot hills do it on the other, so that on the whole, more rain falls in Lammermoor than in the Merse.

MANNER IN WHICH LAND IS POSSESSED.

THERE are no overgrown estates in the county; they run from 500l. to 5000l.; there are a number below 500l. but few above 5000l. If below 100l. the proprietors are generally termed portioners, of whom there is a number in the county. Many of the gentlemen reside on their estates through the whole year; more reside in summer. The whole almost keep small farms; some have large ones round their seats, for the use of their families, and for trying experiments in husbandry, and the rearing of stock. They are visited by their own and other tenants in the county, on invitation; and this easy behaviour towards the tenants, has in many instances contributed to the improvements of their estates, by exciting a spirit of emulation: many of the smaller proprietors and portioners farm their own possessions.

MANNER IN WHICH THE LAND IS OCCUPIED.

The greatest part of the county is now occupied by such farmers as, at an earlier period, or in several other counties in Scotland, would be termed great farmers. There is however a great difference in the size of the farms; they run from 20l. to 800l.; if below 20l. they are called possessions. It is no uncommon thing for one tenant to have two or three of the middling class, which is reckoned from 100l. to 300l. a year. The cause of this accumulation, in general arises from a great quantity of land originally moor (that cannot be farmed by itself) being attached to the good lands, but oftener from the experience the proprietor has of his being more likely to have the lands better improved, and the rents more regularly paid, by accepting of a great tenant, rather than several small ones. It has been found and experienced in this county, that the great, considerable, and middling rank of farmers pay their rents best, and this has been attributed by some to their having the land cheaper than smaller tenants; but this is not believed to be the case.* Small tenants cannot exist on a possession of poor land, which in general they look out for, unless they have another business, or are employed by the proprietors and greater farmers, for bringing home carriages of lime, &c. in which they employ their horses and servants during the whole of the improving seasons, and entirely neglect the culture of their own possessions. In few or no instances in this county, is it known or believed, that a small tenant pays a greater rent than a greater tenant would most readily pay for the same possession, unless it be in the neighbourhood of towns and villages, where the lands are parcelled out into acres, or small fields, and possessions, for the accommodation of horse-dealers,

* Small tenants may do on very good lands, so situated with respect to manure as to admit of their being kept mostly in tillage, or in such a neighbourhood as a dairy can be carried on to advantage, for the sale of milk and butter, &c.

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cow-feeders, and trading people. On all poor grounds small tenants have been found to be a burden: on many of the estates in this county, at a distance from towns, these tenants are employed by their landlords or the neighbouring tenants: this circumstance shews, that all the labour they can bring forward is necessary for carrying on the operations of the county, and if they are not employed as poor tenants they will be employed as servants, and most probably with more profit, more comfort, and less care to themselves. But the desire of tradesmen, labourers, gardeners and hinds, who have saved a little money, to become small tenants, is general, and when they get a possession, they suppose themselves their own master; but they are so at the expence of losing their money.

From these remarks it will appear, that it is well and generally believed in the county, that small tenants will never contribute to the improvement of it, or to the raising* of the rents. At the same time many do not approve of, or think that overgrown farms will prove in the end of the utmost utility either to the landed interest or to the state, especially in a grazing county. But while the country is in an improving state, and much to do in it before it arrive at the utmost perfection, it is right that industrious and laborious men, possessed of skill, activity and property, have a fair prospect before them of extending their business in the same way as a merchant or manufacturer may do: and with the same desire that a saving, discerning and active proprietor may lay plans for having it in his power to buy his neighbour's estate, if he see a chance of its going to market, so may an active tenant lay plans for taking his neighbour's farm. If there is any uncommon check given to this, the improvement of the lands upon short leases will cease, and tenants possessed of property

* There are instances in the county, where large farms for the two last setts have brought more than double rent at each sett, while small possessions in the same neighbourhood have not stood their ground.

will

will employ it otherwise than in farming; their sons will also be bred to other business, and in place of having, as now, ten or twenty offerers for a farm when out of lease, one may hardly be found.

LAND HOW EMPLOYED.

It is before observed, that in the lower district of the county we suppose 50,000* acres only in tillage. In general, the leases to tenants allow them to plough the half, but those possessing much land originally outfield or moor, do not go to that extent, and taking the grass land kept by proprietors about their seats, the planted land, and natural meadow or bog, and moor, into the account, will, it is presumed, reduce the quantity in tillage to the proportion above stated.

There is a wonderful dexterity among the farmers in this county, in turning their lands from tillage to grass and from grass to tillage, especially the outfield class, dictated by the nature of the soil, the prices of grain, stock, &c. The original infield lands on every farm in the county, in general mark themselves of superior quality, and probably will do so for ages to come. If they are well cleaned, and slightly manured, and sown off with grass-seeds, they will continue to pay a good rent during an ordinary lease of nineteen or twenty-one years, and probably forever; but the outfield lands, and those originally moor, require to be shifted from grass to tillage frequently, to be refreshed with manure for renewing the pasture. Where these lands are dry on a free bottom, such as are loam, gravel, sand, free-stone or rotten rock, they are of much use in producing turnips for winter food

* The quantity in tillage this year will be more than here stated, as many of the farmers are ploughing out all they can, on account of the high prices of grain, and an apprehended opinion that the prices of stock are to fall.

for

for the stock of the farm; and for these lands there is at present a great demand. In the modern husbandry of the county, they are ploughed out of grass from one to five years old. In the first case there is only one crop of oats taken; in the subsequent or last cases there are generally two crops taken; thereafter the field is fallowed, and dunged for turnips; the year after, it is sown off with grass-seeds along with oats, barley, or spring wheat. Where circumstances will allow that the turnips be eat by sheep folded on them, the field is much improved by this course of three or four years culture. The lands originally moor, unless dry on a free bottom, and fit to carry turnips as mentioned above, are not ploughed but with a view to better the pasture: when they are ploughed, the management is nearly the same as above described for the outfield land; but it is with great reluctance that the farmers plough up so much of this class of soil in the lower district, as they know to a certainty that the crops will not pay for the labour and manure, and many of them repent of having attempted to improve it at all. Where a tenant on a moderate lease possesses much of the moor lands on a wet bottom, the loss by the improvement or tillage of them will be considerable in wet and late seasons; but as the labour and crops are blended with those of other lands, he is not so sensible of the loss, and goes on adding considerably to the beauty of the country, and no doubt to the increase and value of the stock in it. Moor lands ought to be, and probably are kept in the best order by proprietors, who improve them with a view of improving and enlarging the pasture, without making any attempt to be paid for the first cost of the improvement by cropping, and whose after management is calculated to pursue the same object.

A tenant generally takes two or three crops, with a view of being in some degree paid for his outlay of money, which in many situations will be from 4l. to 5l. sterling per acre: where he crops in this manner in the beginning of the lease,

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he hurts himself; where he does it at the end of the lease, he ruins the lands. The tenants go upon the idea that they ought to have ten per cent. for the outlay on improvements on a nineteen or twenty-one years lease. A proprietor is equally a gainer if he get five per cent.: he has the advantage of the improvement in perpetuity; a tenant has it only from the time it is made to the end of his lease.

GRASSES CULTIVATED.

The grasses used in the county are red and white clover, rib-grass, yellow clover, and rye-grass, and these in such variety of proportions as suits the nature of the soil in the idea of the farmer: 8 lb. of white, 4 lb. of red, and one bushel and a half of rye-grass, with 2 lb. of rib-grass to the acre, is a common proportion, where the field is intended to remain in pasture some years. If it is sown down with a view to one crop of hay only, the greatest proportion of the grass-seeds is red or broad clover. It is believed that there is 10,000l. sterling paid yearly by the county for grass-seeds imported from England and Holland; the importers and retailers thereof charging at least ten per cent. profit, the county pay to them 1000l. sterling yearly.

The lower district of the county being now almost wholly inclosed, and greatly improved, and as before mentioned, so much of it in grass, the rearing and feeding of stock must be a great object. Farmers of experience and observation have no hesitation in asserting, that the stock in the county at large must pay the whole rent of it, otherwise the tenants will not thrive. If the grain produced pay all other expences of labouring the county, and feeding the labourers and horses, &c. it does well. To farmers near the Tweed, the Whitater, and on some parts of the coast, this assertion will appear to be strong,

strong, but the fact will be readily admitted by the majority of the county.

In this county, where there is such an inequality in the size of farms, and variety in the classes of the soil, added to a difference of climate, occasioned by heights and other circumstances, the farmers will always entertain a difference in opinion with regard to the species of stock most profitable. Sheep and black cattle are the kinds on which the payment of the rents depends. Breeding of horses is profitable, but the long carriages and hard labour of the county, is not friendly to the breeding of this species of stock: on the whole, the number of draught horses bred in the county is very far short of the consumption, and many thousand pounds are sent to the west of Scotland yearly, for purchasing these useful animals; and for this county the largest size is not sought for, as they are thought to be too heavy for the long carriages, but rather, they are too high in price for general use. Twenty years ago, 12l. or 15l. sterling was thought a good price for a work horse for the plough or cart: they have lately got up to 25, 30 and 35l. sterling. One of the ordinary size will weigh about 85 stones English, as they walk. Sheep and cattle bred in the county are in general divided into three classes: the Merse breed, Lammermoor breed, and half or Cheviot breed. These again are distinguished by the name of the breeders, or of the farms and districts on which they are bred. Along the Tweed, and in the lower district of the county, the sheep are of the heavy kind, from 16lb. to 26lb. a quarter, when well fed; and the cattle from 50 to 70 stone English, when fat at three and four years old: both are much improved of late years, by a particular attention to the choice of tups and ewes, bulls and cows, from Northumberland, and several of the best breeding counties in England, from which they have been brought at high prices, by many gentlemen and farmers eminent for their attention and care to secure the reputation of having a fine breed. On the edges of Lammermoor the sheep

are of the Cheviot, or Kail-water (a district west of Cheviot) breed, improved by tups from the lower district and from England. They will weigh from 12 to 15 lb. a quarter when fed; but the breeders on these edges seldom feed their cast sheep; they are sold to graziers in the low country, or to England. The ewes go off in October, and bring from twelve to eighteen shillings a head; the wedder sheep or hogs go off in April or May, at the same price, if they have been well wintered on turnips. In Lammermoor the sheep are mostly of the black faced Tweeddale kind. The ewes are sold after carrying two or three lambs, at about ten or twelve shillings a head; the wedders are sold at different ages, according to the situation of the farm. Formerly they were kept till they were full three years old, and after being shorn, they were and are still called four year olds. They fetched, after being shorn, from seven to nine shillings a head. They now go off to the graziers in March, April, May, June or July, before shearing time, from thirteen to fifteen shillings a head; but very few are now kept to that age: they are sold when hogs, at seven or eight shillings, or when dunmonts at twelve or thirteen shillings a head.

Salving of sheep has from time immemorial been a practice common to both districts, but for many years past the practice has in general been given up in the Merse, except as to hogs. On the edges it is still continued, but by much a lighter hand than formerly: one firkin of butter rinded, and mixed with five, six, or seven Scotch pints of tar, is reckoned sufficient for 100 or 120 sheep. In Lammermoor, the practice still continues, of laying on a heavy mixture with a heavy hand: two pounds of butter to one pint of tar is the common mixture, and twelve pints of tar with twenty-four pounds of bad butter, is the dose for 80 or 100 sheep. This adds to the weight of wool, but greatly reduces the price.

It is in general understood to be the grease (butter) that is useful in smearing or salving: it repels wet, keeps the skin moist,

and

and the wool in a sappy growing state, especially in the spring, when the sheep are likely to get a nip in their growth for want of food. These purposes are answered in the Merse by better pasture, or green food; but on the edges, and in Lammermoor, it is thought advisable to continue the practice of salving. The additional weight of the wool will make up for a very small discount of the price, and for the expence of salving. It would however be a considerable improvement in Lammermoor, to use more butter and less tar in their mixture. Those farmers who have done this, have often sold their wool at a third more price than their neighbours, sometimes at double the price. On the edges of Lammermoor the farmers are also improving their cattle, by selecting better cows and bulls; and although their cast comes to the markets in May and June, and appear to be lean, and stinted in their growth, yet the graziers buy them readily, knowing they will rise in size by good feeding. In Lammermoor the breed of cattle is small and hardy, but slow in feeding, and does not sell so readily to the graziers who occupy good lands, but still the cattle find a ready market, being purchased by those graziers who possess coarser lands, and who have no prospect of shifting their stock before November, when they sell off to the butcher. Each kind of the stock bred in the county, seems well adapted for their respective pastures and climate, and it is not evident that any great change in the kinds can be made with advantage to the occupier of the lands.

It has been found by experience in the county, that the stock will always improve in proportion as the pasture is improved, and it will fall off as the pasture falls off. Outfield and moor lands of this county, having been improved by lime, and laid off to grass, will fall off if allowed to lie in pasture too long, and so does the stock pastured on it. Every breeder in the county, of discernment, is attentive to have both his sheep and cattle of as large a size and of as good a breed as his pastures will carry forward. If his farm is turnip land, he

will be enabled to improve his stock, by having plenty of winter or spring food. Under these circumstances, the stock in the county will improve, as it has done, in proportion as the lands are improved, the breeder having always a moderate recourse to those who lay themselves out for the tup trade. But these last feed so high, that their practice cannot be imitated by the county in general. There must and will be always in this county, a variety in the size rather than kinds of stock, in proportion to the variety of soil and climate, &c. even although all other matters, as to skill, care and attention, are equal. One of the highest farms of Lammermoor, where all the improvement ever attempted was the burning of heather, when too long, or foggy at the root, is now stocked with the Cheviot breed of sheep: the consequence is, that the number wintered on it is reduced to one half. Other farms have been tried with the white faced sheep for years, and the same tenant, from the experience of being worse paid on the whole, changed his stock to the black faced kind.

This variety of the size, and kind of stock, opens a field of speculation to a certain number of the tenants in the county, called graziers, for it is to be remarked, that a considerable part of the rents of the county is paid by them: these, in some cases, set apart a proportion of their farms for feeding or grazing cattle and sheep, and sometimes they occupy old grass land about gentlemen's houses, from year to year, which they use for the purpose of grazing a stock which may be reckoned in some degree merchantable. The selecting of stock with judgment at Martinmas, or in the spring, for the eatage of the ensuing summer's grass, is a matter of consequence to the graziers: picking up the best of the kind, and size adapted to the nature of the pasture, is a great point gained. Their profit is more or less in proportion as this part of the business is well or ill done.

This variety of stock, and the letting of grass-fields from year to year, brings into play another set of men, many of them

them unconcerned with farming, called jobbers, who go about the country buying from one hand and selling to another: however, owing to the high prices of stock for some years past, many of the farmers have been pushing to keep their hands so full of it, that they are obliged to take grass-fields for their own stock. These have been running up the grass-lands for some years past to such a price, as to drive many of the jobbers out of the field. Many of the gentlemen and graziers feed a number of Highland cattle, the former for their own table, the latter for the market; and sometimes it is contended in the county, that a well-chosen Highland runt, or stot, will pay as well for six month's grass as the best bred ox in it; however, this must very much depend on the price paid for both before feeding. It may be alledged, that a Highland stot will feed on poorer land than a well bred ox can feed upon, though not in a shorter time; but in no instance is it alledged, that a Highland stot will pay so well as a country bred beast for a twelvemonth's feeding; that is, six months on grass and six months on turnips.

The graziers in the county, when they pick or buy up cattle for keeping in hand eighteen months or two years, look out for good growers: when they mean to shift, or dispose of them in four or six months, they prefer good feeders. In both cases, the long face, open countenance, clean and small turned up curving and spreading horns, straight shanks, straight and round along the back, full and deep on the rib, short legs, turned out thigh, and open boned, are all favourable marks.

The pastures for feeding oxen are generally kept rough (rank), and it is thought there can hardly be an error in having them too much so. The left grass is always eat up once in the year, and the more grass left on the pastures in winter, the better for the land; besides, the grazier, by keeping good pastures, with money in his pocket, is in many cases freed from the risk of being obliged to go to a bad market.

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The choice of sheep for grazing for a season, is generally determined by the character they have of being sound and hardy, and having been bred on a pasture not so good as the one which is intended for their being fed on. There are marks by which a preference is given; other circumstances, as to soundness, being alike, though the modern marks, cried up by some of the breeders, of being small boned, having small stomachs, and getting soon fat on a bare pasture, are not much attended to by the graziers and butchers: the last especially, who buy for the Edinburgh market, prefer the Cheviot breed crossed and raised to size by large tups, to the Bakewell breed. This no doubt arises from this circumstance, that the Bakewell breed handle well, and are sold off younger than the other kind, which generally die better than they handle.

The horses bred in the county for some years, were rather too much of the light cast; however, the farmers are now correcting this mistake, by preferring stallions of the draught kind to those of the hunter kind, but still there are several of the last kind bred in the county: when they turn well out, they are sold at Newcastle fair at high prices; from forty to sixty guineas is not uncommon: some of the other kinds bred, are sold at one, two, or three years old; but on the whole, as before observed, the number bred, is not equal to the supply of the stock required for farming and other purposes of draught. There are about 4200 draught horses in the county, and there are 8000l. sent yearly out of it to the west, for horses to keep up this stock, and afford a supply for the farmers on the south side of the Tweed, who apply to the dealers in this county; but it is believed that the sale of horses in this county does not exceed 1000l. sterling yearly.

The cows in the lower district of the county are of a middling size; in the upper district they are much smaller. Many of the first, when they begin to grow old, are bought up by dealers in the spring, when new calved or at the point of calving,

calving, and sold to the cow-feeders in Edinburgh from 5l. to 12 l. a head: they are house fed, on draff and greens, &c. all the summer, for the sake of milk, and the following winter they are sold fat to the butchers; and this hidden supply of beef, very much tends to keep down and steady the prices in the market of Edinburgh, as long as it lasts. The cows not with calf are grazed in the county.

Swine.—Every farmer almost keeps two or three swine; at all the mills and breweries in the county there is generally a broad (breeding) sow or two kept, and some farmers also keep one or two, where there is good convenience for keeping. The profit is considerable. The gentlemen commonly rear the small kind for their own table. The article of pork makes a considerable part of the food of the labourers of the county; every one who has an opportunity, has a pig either tethered at the door, often on highways, or grunting in the house: they buy them when six weeks old, at five to eight shillings, and keep them on the refuse of the yard and the milk, till six or nine months old, when they are killed and salted for the family, after perhaps having got a peck or two of grain honestly come by, &c. &c.

FAIRS.

The payment of so much of the rent of the county depending upon stock, and only part of that on the breeders of it, the fairs in the county, of consequence, are generally well attended. The breeders who have their yearly cast to sell at stated seasons, are known to the graziers, and dealers from England, and generally sell at home; but the graziers attend all the fairs, being on the look out for a good bargain, which is more in expectation than in reality, and only to be had on account of the seller of stock being sometimes in want of grass, some-

times in want of cash, often in want of both. The first fair in the season for cattle, is held at Greenlaw on the 22d day of May, but at it, there is only what is called a poor shew of milk cows, and a few oxen or young stiers, which are picked up by the graziers. The next fair, which is better attended, is held at Dunse on the first Thursday of June. To it the graziers resort, finding a better choice of cattle. The sheep offered to sale at this fair are not in great numbers, and are chiefly of the Lammermoor breed, hogs or wedders. The cattle in good driving order are bought up by English dealers, and the heavy kind that are fat, are bought up for the Morpeth market. Swinton fair, held the third Thursday of June, is like Greenlaw, and not considerable. Earlston, held the 29th of June, is a good market for cattle; at it are sold to the English dealers a number of the lighest and best conditioned cattle, and a number of young cows in good order for feeding off in the season. Dunse August fair, held the 26th of that month, is the most considerable in the county; at it and in the country, two or three days previous to the fair, a number of good cattle are bought up from 8l. to 14l. a head, for driving to the markets in Suffolk, &c. There are fairs also at Swinton, Greenlaw, Earslton and Dunse, in October and November, but these are inconsiderable; and the fairs at Lauder, Chirnside, Foulden, and other places, in summer, are of the same kind. Formerly, Dunse November fair, used to be a great market for marts, that is, fat cattle of a small size, sold to farmers, trades-people, &c. for salting for winter use; but the practice of killing marts, now that good beef is to be had all the winter through, is mostly given up. At all these fairs, the business of the day is finished with the horse market, which commences about twelve o'clock mid-day, and ends in the evening, more like a scene of gambling and riot than fair dealing.

Besides these fairs, the graziers, breeders and dealers in the county, attend the markets of Stanshawbank, near Wooller,

ler, St. Ninians, and Wooller in Northumberland, for the purpose of buying and selling stock of cattle and sheep; as also the fair at St. Boswell's (the principal sheep and lamb market in the south of Scotland), Jedburgh, in Roxburghshire, and the markets at Newcastle and Hawick in November, are attended for the purpose of buying winter stock of cattle; at the first, large cattle for wintering on straw and grazing the following season, are purchased, but not in great numbers; the latter is principally for young cattle from one and a half to four years old, and here an excellent thriving hardy breed is to be found. They are bought by the farmers who rear cattle but do not feed. The only weekly market worth notice is at Dunse, on Wednesdays, where grain is sold by sample. The markets at Kelso on Friday, and Berwick on Saturday, are attended by those farmers within reach, for the same business. The grain sold at Dunbar is also sold by sample, but that sent to Haddington and Dalkieth goes in bulk, in sacks containing a boll each. The sacks are returned with the money. These are held to be the best markets, but they are not within reach of the greatest part of the county. However, part of the oats in the lower district is sold to the millers on the edges and in Lammermoor, and drove to them by the farmers; and after being made into meal, it is carried by the millers to the Lothian markets, chiefly Dalkieth and Edinburgh. These long carriages of the grain before it reach the market, is a considerable drawback on the corn farms in the county. It requires two days work of a cart with two horses, to carry four bolls of wheat or five bolls of barley from near the west end of the county to the markets of Berwick or Eymouth. Sometimes they take coals in return the second day, which is a saving. These carriages were distressing formerly, when all the grain was carried on horseback; they are still distressing, on account of the deepness of the cross-roads; and in comparing the rent of land in this county with that of other counties in Scotland near the markets, and near

manure, the extraordinary long carriages of this county, added to the badness of the roads, is not overlooked as being inconsiderable.

The greatest part of the wool the growth of the county (except a few parcels of the best kind, which are sold to Edinburgh and the north country), is sold to the staplers in Yorkshire, who go round the country about shearing time, and buy it. Some of them employ an agent to buy for them, to whom they give from four-pence to six-pence a stone commission.

The butter made in the county by some of the farmers, and many of the hinds, is salted, and sold in firkins at Edinburgh, Berwick and Dunbar, but not in great quantities. A few of the Lammermoor farmers still continue the practice of milking their ewes: the butter produced from the milk is kept for salving the sheep, and the cheese is sold to the shop-keepers for retail.

WATERING OF LAND.

THERE is little or no watering of land in this county; the land for the most part, in the lower district, lies in ridges; and the runners or burns are lower than the fields, and cannot be brought up to them but by machinery. The good springs are few. In the upper district the waters run in deep hollows, and cannot be brought up to the field. Besides, there is an idea in the country, that watered land rots sheep.* There are, no doubt, in both districts, situations where so valuable a mean of improvement might be adopted, but the truth is, it is not understood in the country: some gentlemen and farmers who have seen the operation in England, are just beginning to try experiments.

* From the excellent Report of the Agriculture of Wiltshire, by Mr. DAVIS, it appears, that water meadows are of inestimable advantages to the sheep farmer, and cannot be too strongly recommended.

GRAINS CULTIVATED.

THE grains principally cultivated in the lower district, are wheat, pease or beans, barley and oats, and among the old-fashioned farmers, they run in this succession in nearly equal quantities on all the land fit to carry wheat, still termed in-field. The land reckoned unfit for wheat, is cropped generally with oats. If it is got well fallowed and manured with dung, it is sown off with grass-seeds. In the upper district, the grains are principally oats, and a small proportion in bear (or big) and pease. Of each of these seeds there are various kinds cultivated, or rather a difference of the kind, arising from the same seed having been long naturalized, to a certain country, climate, or soil. The wheat in use is the red and white Kent golden ear, short headed, and spring wheat, with many other kinds lately introduced. The wheat is pickled by being steeped in water salted, or in chamber ley for a short time, and afterwards dried with slaked lime before sowing, which prevents smut. The pease are known by the names of cold seed and hot seed; oats by the names of cold seed, whit seed, or hot seed, which is the kind cultivated with care at Blainslie and Fans: Angus, Poland, Dutch, early Essex, Red oats, and Church's oats, are all sown occasionally. Barley in use, is the Suffolk, Lincoln, Thanet sprat, Ware bear, common barley, and rough bear, or big. With regard to the superiority of either of these kinds, there is no satisfactory data to go upon; each have their advocates. In different seasons, according to the chance of their having hit upon the soil friendly to the growth of a certain kind, and a season of general success or failure of either of the kinds, is sufficient to recommend it or condemn it for several years. The hot or whit seed oats is certainly best for general use, and the Ware barley, and red and white Kent wheat deserve attention. This much is certain, and generally known, that there is a

great advantage in changing seeds from one soil to another; but the farmers might avail themselves of this, by changing with one another, without paying two or three shillings a boll additional price for the seed they sow. Sometimes they pay nearly double the price, by sending to Holland or England for seed oats.

ROTATION OF CROPS.

THE lands, in most cases, are turned from tillage to grass with such rapidity, that there are very few tenants who for a succession of years follow any fixed rotation of cropping, except where they possess good wheat lands, and continue the old system of cropping with wheat, pease, barley and oats. Many of the tenants can with truth say, that what they are doing, is better for the land, than what they ought to have done by their leases. The great security to the landlord is considered to arise from the half, or a certain proportion, being always in grass, and so much at the end of the lease being generally agreed upon to be left in grass, a certain number of years old. All these matters are adjusted at the time of making the bargain for a lease. On the dry lands, lying along the Tweed side, and in several other parts of the county, very fit for turnips, the common rotation is:

1. Fallow and turnips with dung.
2. Barley or oats sown with grass-seeds.
3. Clover for hay or pasture.
4. Oats.

OR,

1. Fallow and turnips with dung.
2. Barley and grass-seeds.
3. Hay or pasture.
4. Wheat.

When

When the lands are not ploughed for oats or wheat the fourth year, as in the above-mentioned rotations, but allowed to remain two or three years in pasture, they are ploughed in January or February, and cropped:

1. Oats.
2. Oats.
3. Fallow and turnips with dung and lime.
4. Oats, barley or wheat with grass-seeds.

OR,

1. Oats.
2. Fallow and turnips with dung.
3. Wheat, oats or barley with grass-seeds.

To carry on the system of having wheat after turnips, the land must be good and early, otherwise the wheat sown in February and March will not ripen in season; if it do, the lands carrying a good crop are held to be the most valuable in the county. Wheat is not sown after turnips, except on lands near the Tweed, or the sea coast. Land not reckoned good for wheat, nor fit for turnips, gets more time to rest than the other classes; especially if it is what is called grassy land, it remains in pasture from one to five, six or seven years. When it is brought again into tillage, it is ploughed soon after Christmas, that it may get the winter's frost to expedite the operation of harrowing; then it is sown with,

1. Oats.
2. Oats.
3. Fallow, limed or dunged, sometimes both.
4. Barley or oats with grass-seeds.

OR,

1. Oats.
2. Pease.
3. Barley.
4. Oats.
5. Fallow, limed or dunged.
6. Barley or oats with grass-seeds.

Or what is now reckoned better husbandry, it is sometimes cropped, or,

1. Oats.

1. Oats.
2. Fallow, limed or dunged.
3. Barley with grass-seeds.

OR,

1. Oats.
2. Barley.
3. Oats.
4. Fallow, limed or dunged.
5. Barley with grass-seeds.

On the good wheat lands where the old system of cropping already mentioned is a little departed from, the rotation is:

1. Fallow.
2. Wheat.
3. Beans or pease.
4. Barley.
5. Broad clover.
6. Oats.

OR,

1. Fallow, limed or dunged.
2. Wheat.
3. Beans or pease.
4. Wheat.

OR,

1. Fallow, limed or dunged.
2. Wheat with grass-seeds.
3. Hay or broad clover.
4. Wheat or oats.

When this last kind of land is laid to grass for pasture, it is generally sown off with the first crop after fallow.

It is not uncommon to take a crop of oats after wheat, and thereafter to fallow and manure the land; but very often this practice is forbid by the leases.

It has already been observed, that the land originally moor on a wet bottom, is ploughed only for the purpose of refreshing or renewing the pasture, no dependence being had on the crops as affording profit to the occupier: when they are ploughed, the ordinary rotation is:

1. Oats out of two or three year old grass.
2. Oats.
3. Fallow and turnips with dung.
4. Barley or oats with grass-seeds.

OR,

1. Oats.
2. Fallow and dung for turnips.
3. Barley with grass-seeds.

Where

Where this class of soil has not been over limed at the first improvement, and is pretty deep, it has been found to answer well to fallow it the first year after grass, thus:

1. Fallow out of grass, lime and dung.
2. Oats.
3. Barley with grass-seeds.

OR,

1. Fallow, dung and lime.
2. Oats.
3. Pease.
4. Barley with grass-seeds.

Or what is still better husbandry:

1. Fallow and lime.
2. Oats.
3. Fallow, dung and turnips.
4. Barley or oats with grass-seeds.

The Dutch, Poland, and early Essex oats, are adopted in the county for sowing off with grass-seeds, as they are stiff in the straw, and do not so readily lodge and destroy the seeds as the common oats do. Many of the knowing farmers do not hay the land intended to remain in pasture for two or three years; they only take a crop of hay from such as is to remain in clover one year: they sell no hay. Both these practices are to be much recommended in districts at a distance from manure. Sometimes the high price of clover-seeds is distressing, and the price of hay tempting, which leads the farmers to take a crop of hay with a view of at least being paid for the expence of grass-seeds over and above the rent; but on the whole, it is not a very saleable article in the country, and few tenants lay themselves out for raising it for sale. Two hundred stones on the acre is reckoned a good crop.

In the upper district of the county, the rotation is generally:

1. Oats.
2. Oats.
3. Fallow, lime or dung.
4. Oats with grass-seeds.

OR,

OR,

1. Oats.
2. Pease.
3. Bear.
4. Oats.
5. Fallow and dung.
6. Oats or barley with grass-seeds.

Besides the rotations here mentioned, there are a number of others followed in both districts; some of them deserve no other record than what they have already got on the Sheriff-court books, by complaints and petitions for sequestrations.

There is a great quantity of the lands in the upper district very fit for turnips, but they are not much cultivated, unless where the land is inclosed, or lies detached from the sheep-walk or pasture. A field of turnips on an open farm, in the moor lands, is considered as a great hurt to the breeding stock of sheep on it. They must be kept at such a distance from the turnip field as to lose the benefit of pasturing round it, during the winter, to a considerable extent; and this does the stock more hurt than the turnip field can make up.

FALLOWING.

THE old leases, by which is meant those about half or two thirds run, generally bound the tenants to have one fifth part of their tillage land in fallow. In the leases of a later date, the pease crop, in many situations, being found of no value, is left out, and a fourth part of the tillage land must be yearly in fallow. The land intended for turnips is first ploughed after harvest; it is again cross-ploughed in March or April, if the season will allow; it is next broke with the break or harrows, and if it requires liming, the lime has either been spread on the stubble after harvest, or it is laid up in large heaps covered with turf or straw, ready to be laid on the land after the second or third ploughing in the spring. The land

is

is then ready for ridging and dunging. The operation of ploughing, harrowing, &c. is not given up till the land is perfectly cleaned.

The land in course to be fallowed for wheat, some years ago seldom got the first ploughing till after Whitsunday: it is now in general ploughed during the winter, and soon after Whitsunday, or after the turnips are sown, it is cross-ploughed. As this land is generally stiff, and the ridges pretty well rounded by two or three gatherings, in cross-ploughing, the field is taken a little diagonally, which gives the plough a better chance to go equally deep on the sides of the ridges as in the middle. The land is then rested some time, and broke with the harrow; it is again ploughed in July; and soon afterwards it is dunged, and ploughed a fourth time; it then rests till it gets the seed furrow in September or October. In some cases the dung is not laid on till the land is to be seed furrowed, but the first method is most common: in both cases, where the land is limed, it is laid on before the dung, and harrowed in. The lands for the most part are straighted into ridges from eight to sixteen feet in breadth. When the turnip land is ridged up for the seed into narrow ridges, care is generally taken to angle the field a little, so that the course of the common ridges shall not be parallel to the turnip ridges, but cross them a little, and thereby divide the dung more equally over the fields when the land comes to be seed furrowed after the turnips are eat off.

MANURES.

The manures in use in the county, are lime, farm-yard dung, rock or clay marl, and, in four or five situations only, shell marl and sea-weed. The lime is brought from Berwick and Northumberland, or from Mid and East Lothians. On

the one side, it is from three to six miles beyond the bounds of the county, and on the other it is from five to eight; yet with all these disadvantages, the quantity of lime that has been laid on in the county, within these last thirty years, has been great. Excepting some old grass lands, that have not been in tillage in that period, and some of the high outfields in Lammermoor, that are only ploughed for the sake of keeping down the heather, the greatest part of the county has been once limed, and a considerable part of it, though at the distance of fourteen or sixteen miles from the lime, has been limed two or three times in the course of a twenty one years lease. So universally has the use of this manure been considered to contribute to the farmer's profit, and the improvement of the lands, that, to a bye-word in the county, an entering tenant would get credit in proportion to the extent of his fallow field and the number and size of his lime heaps. Much has been done, and much may still be done in Lammermoor, by this excellent and immediately operating manure. The great danger from the use of it, on light, dry, loamy lands, arises from over cropping them after being limed. This ought to be guarded against by the landlord, in proportion to the encouragement he gives to the tenant to lime, and by the tenant, in proportion to the confidence he has of getting a renewal of his lease on fair terms. For it is now believed by most tenants, acquainted with the effects of lime on the dry lands in the county, that an unlimed farm, in a situation where lime is not difficult to be brought, is of more value than one that has been limed and afterwards over cropped.

Farm-yard dung is that which is collected from the stables, cow-byres, and turnip-sheds, and from one or two courtings, where young or wintering cattle lie, and feed on straw out of hacks, or from courtings where young cattle are confined during the summer, to feed or soil on cut clover. (This practice is not general; where it has been tried, the effects have been sensibly seen, from the quantity of dung produced,

and

and the advantage of getting the land intended for turnips dunged before winter; but, on the whole, it is believed that the cattle so confined, are so much stinted in their growth, as to counterbalance the good effects above stated). All these are brought together into one courting; it is generally turned over before leading out, or, what is much better, it is led out into the field intended for turnips, and laid in middings, taking care not to let the carts go upon them, but keeping a man or two to throw it up into a midding as the carts are emptied. The coarsest or longest of the dung is kept for the fallow intended for wheat. If the turnip field requires all the dung made on the farm, the wheat fields are limed. The towns and villages in the county being but small, there is no dung to be had from them to purchase, for any fields above a mile or two distant from them; therefore, it is of the utmost importance, to increase the farm-yard dung as much as possible, by bedding the courtings and cattle with every kind of vegetable substance that can be collected on the farm.

Rock and Clay Marl.—These are found in great abundance on the banks of the Whitater and Blackater, and in many fields of the lower district of the county; and when improvements first began to be carried on with spirit, by many of the gentlemen and farmers in the county, it was the manure most used, in all cases, where it lay near the fields to be improved. The quantity laid on an acre, run from 300 to 500 wain load, or from 400 to 600 cart load, which not only added a sufficient quantity of calcareous matter, but also an additional thickness to the soil, and was then, and is still considered, as an excellent manure for moor and thin dry soils, but it is not always to be had in the neighbourhood of them. Where the pit was in the field to be marled, twenty loads a yoking, or forty a day, was the stated quantity for one cart or wain. A state of the expence of marling, compared with the liming sufficiently, in a situation moderately distant from lime, will

probably account for the farmers having entirely laid aside the use of the former.

Expence of marling ten acres, at the rate of 600 cart load per acre:

Three carts, at 4s. per day - -	£.	0	12	0
Two men to fill, and one to pick - -		0	3	0
One man to spread - - - -		0	1	0
One day's expence, -	£.	0	16	0

for which 120 load is led out and spread: 120 × 5=600 and 16s. × 5, is 4l. the expence of marling one acre, and of ten acres 40l. in fifty days.

The expence of liming ten acres, in the same situation, which is taken at the distance of thirteen miles from lime:

Fifty bolls of shells, at 7d. - - -	£.	1	9	2
Driving said lime, ten carts, at 4s. - -		2	0	0
Spreading of ditto, - - - -		0	2	6
Expence of one acre, -	£.	3	11	8

× 10 acres, is 35l. 16s. 8d. Hence it appears, that the expence of liming is very little less than that of marling; but the saving of money is not all, there is a saving in point of time, of twelve days, allowing five days of two single horse carts for spreading the lime; and a tenant on a short lease has an interest to run against time. Add to this, that a great deal of the fields, conveniently situated with respect to good marl, having been once gone over, it is found not to answer a second time, neither is it found in all situations to answer land that has been well limed before marling. The good effects arising from the use of this marl, must have been in some cases imaginary; having been produced from fallowing, and mixing different substances with the soil improved. We have had two kinds of these substances formerly used as marl, taken from different pits, examined by the best chemist in Edinburgh: the result of his report is, that one of the sub-

stances

stances is not marl, and the other is very weak, containing only 15lb. of mild calcareous earth in 100lb.

The shell marl has been found only in a few places, and it has not been carried, or allowed to be carried, beyond the estate where it has been found. From forty to sixty loads have been laid on an acre; and sensible and discerning farmers, who have used it as a manure, declare they prefer a good liming to marling at this rate. There is just now discovered a field of fine shell marl of near 100 acres, in the south west end of the county, which being at a great distance from lime, must be much improved by the marl, if the price is not held too high.

Sea-weed is not in abundance, owing to the boldness of the coast: it is, however, got in three or four places. Where it can be brought up to the fields, the quantity laid on an acre depends on the quantity thrown in by the sea at these places. It is generally laid on the land intended for barley or wheat.

IMPLEMENTS OF HUSBANDRY.

The plough most in use, is the kind first introduced into Scotland above sixty years ago, by an itinerant plough-maker of the name of Lummas, or Lumbas. He made many ploughs, and left moulds for the country wrights to make others by. However, from a dislike to improvements at that period, they went totally into disuse, and no remains of them could be found about forty years ago (except in this county), but by picking up some of the moulds from old wrights. The plough was again introduced, made on a better construction by James Small, who settled in the year 1766, and resided long in the county. He, from his own genius, and the hints he got, improved it much from time to time, and it is now in general use in the county, except in some of the high land parts of Lammermoor, where the old Scotch plough is

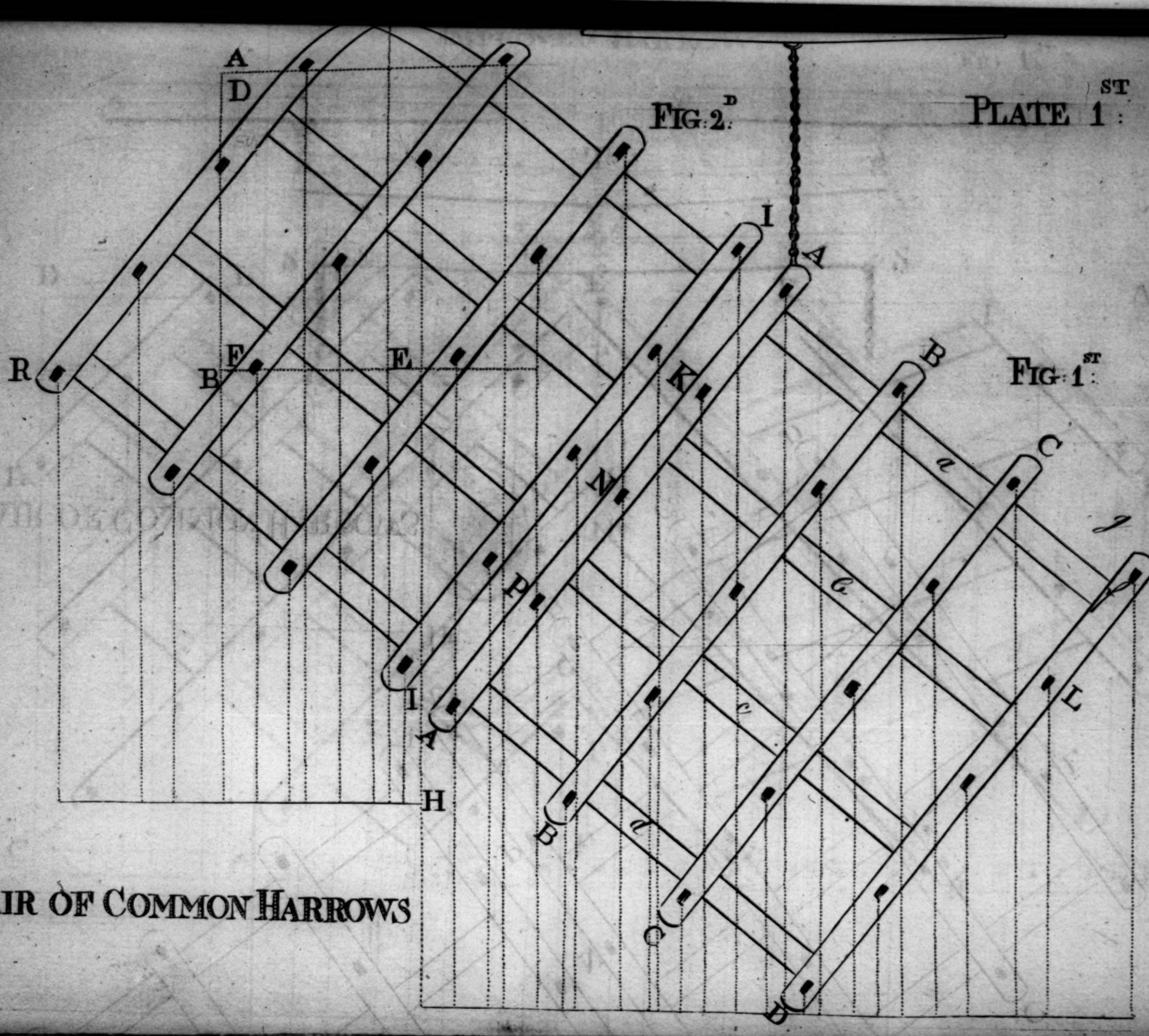
is still used. (See Small's plough well described in his own publication on the making of husbandry utensils, and in the Gentleman Farmer. See the Scotch plough well described in Dickson's Agriculture). It is drawn by two horses, the common strength applied to every two horse plough in the county, except on high and banky lands, where oxen are used behind the horses.

The harrow in common use, is the common harrow, in shape and use nearly the same all over Scotland (see a draught of it, as used in this county, plate 1st). From its being drawn by one corner, and the teeth equally distant in the bulls, the inequality of its operation will appear at once from the lines drawn from the teeth parallel to the line of draught. However, as it shakes and tosses about, this fault is not so evident, except on very fine land. Many years ago an attempt was made to improve it, by keeping the bulls at the same angle, and the teeth at equal distances on the bulls (see plate 2d, fig. 1st). It answered well, and every farmer who tried it, liked the expedition of its operation, two horses in it doing as much work as three or four horses with the common harrow could do in the same time. It was difficult to make, did not endure much fatigue, and therefore was laid aside. Could it be made of iron sufficiently strong, and light, it would be a great saving to the farmer. The next attempt to improve it, is shewn, plate 2d, fig. 2d. This proved an useful harrow in crossing land, but on going length-ways, on stiff lea, and the harrows being drawn by one point at A, was apt to turn about, so that the teeth on each bull came into the same tract. The author of these attempts to improve the harrow (and writer of these remarks), now uses them with their bulls cross-ways, which make an excellent harrow, but the bulls are liable to split.

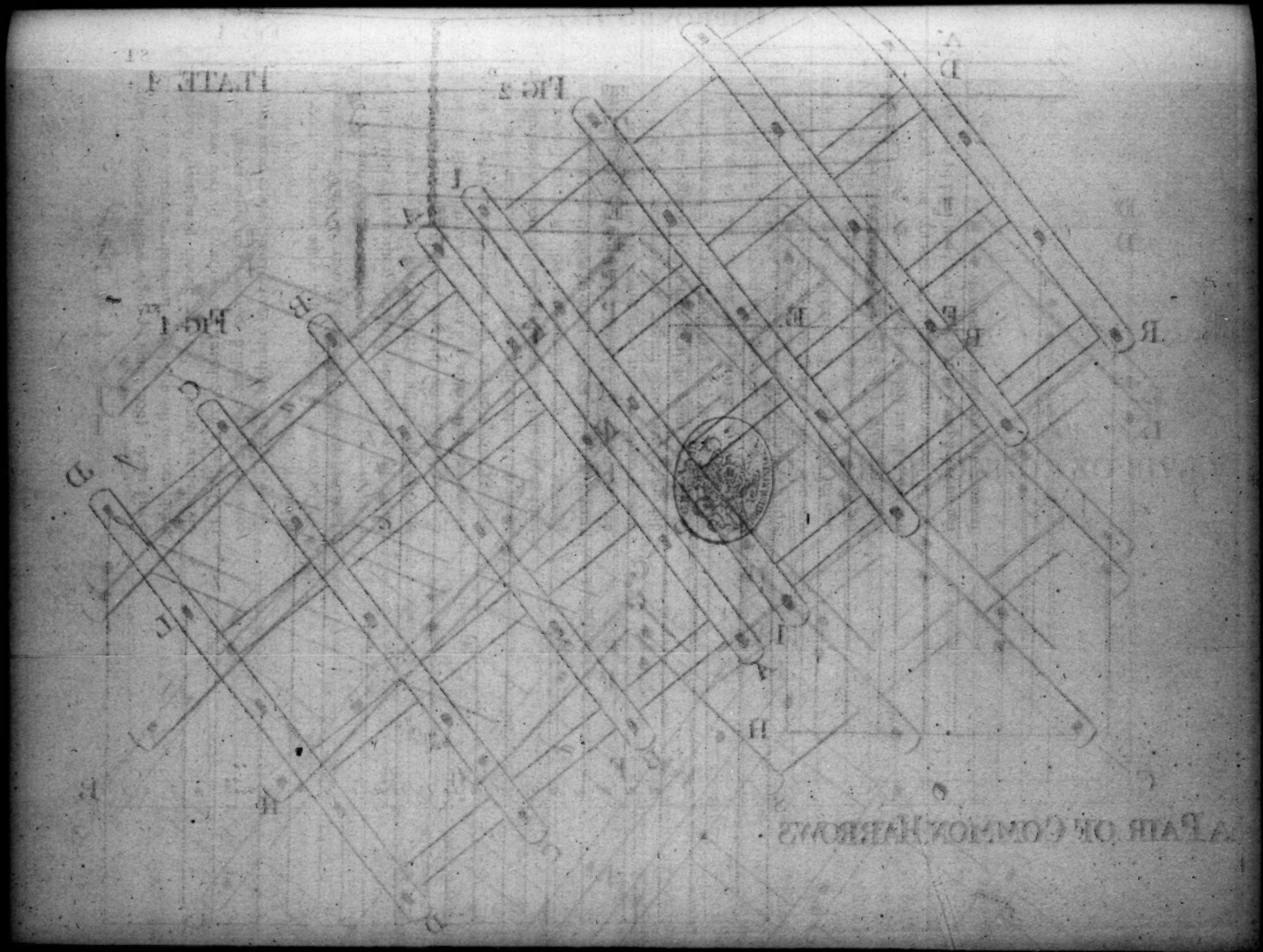
The breaks most in use in the county, are represented in the annexed plates, but others have been tried by one or two farmers, and are likely to answer.

The

PLATE 1ST

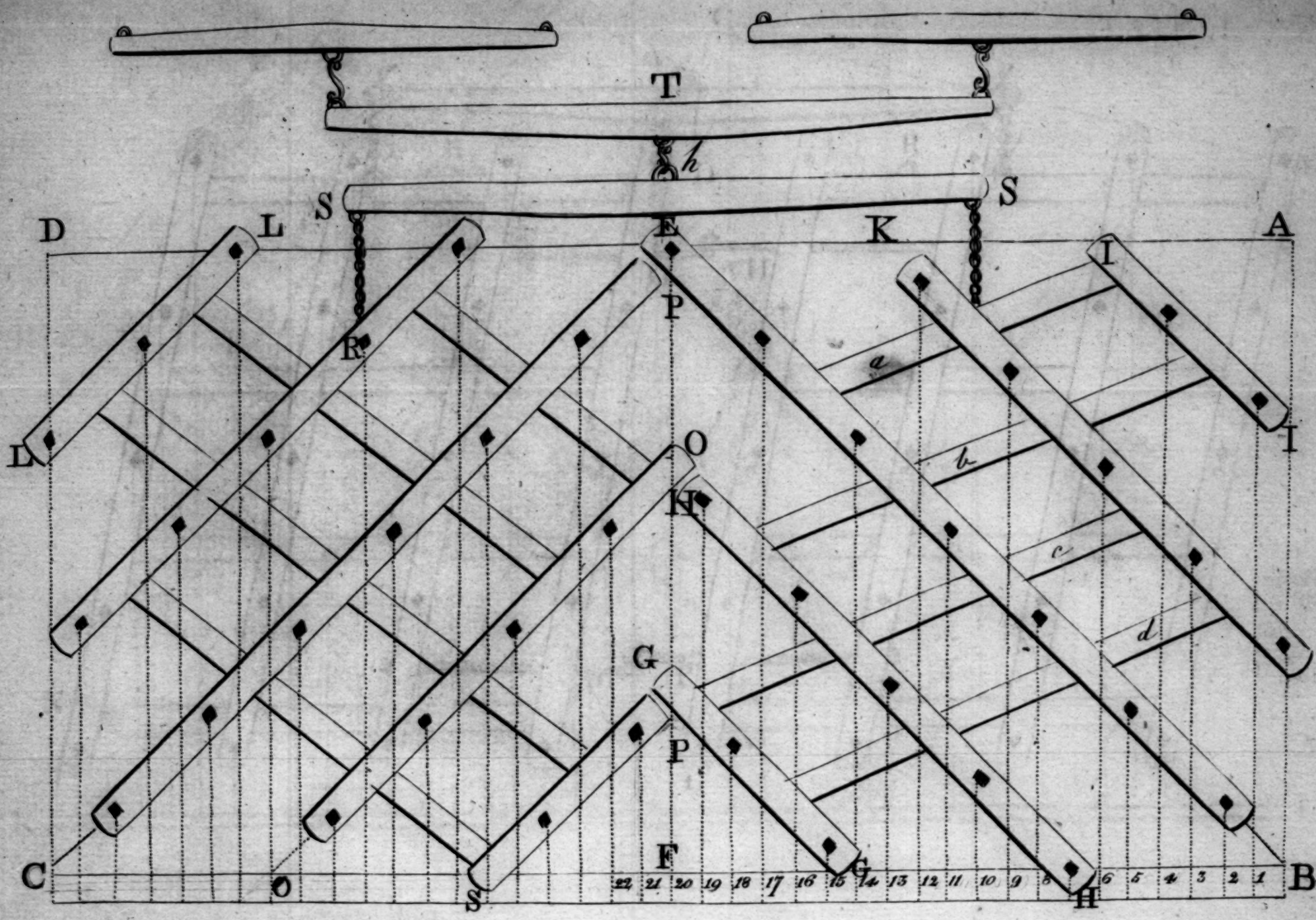


A PAIR OF COMMON HARROWS



IMPROVED HARROW.

FIG: 1ST.



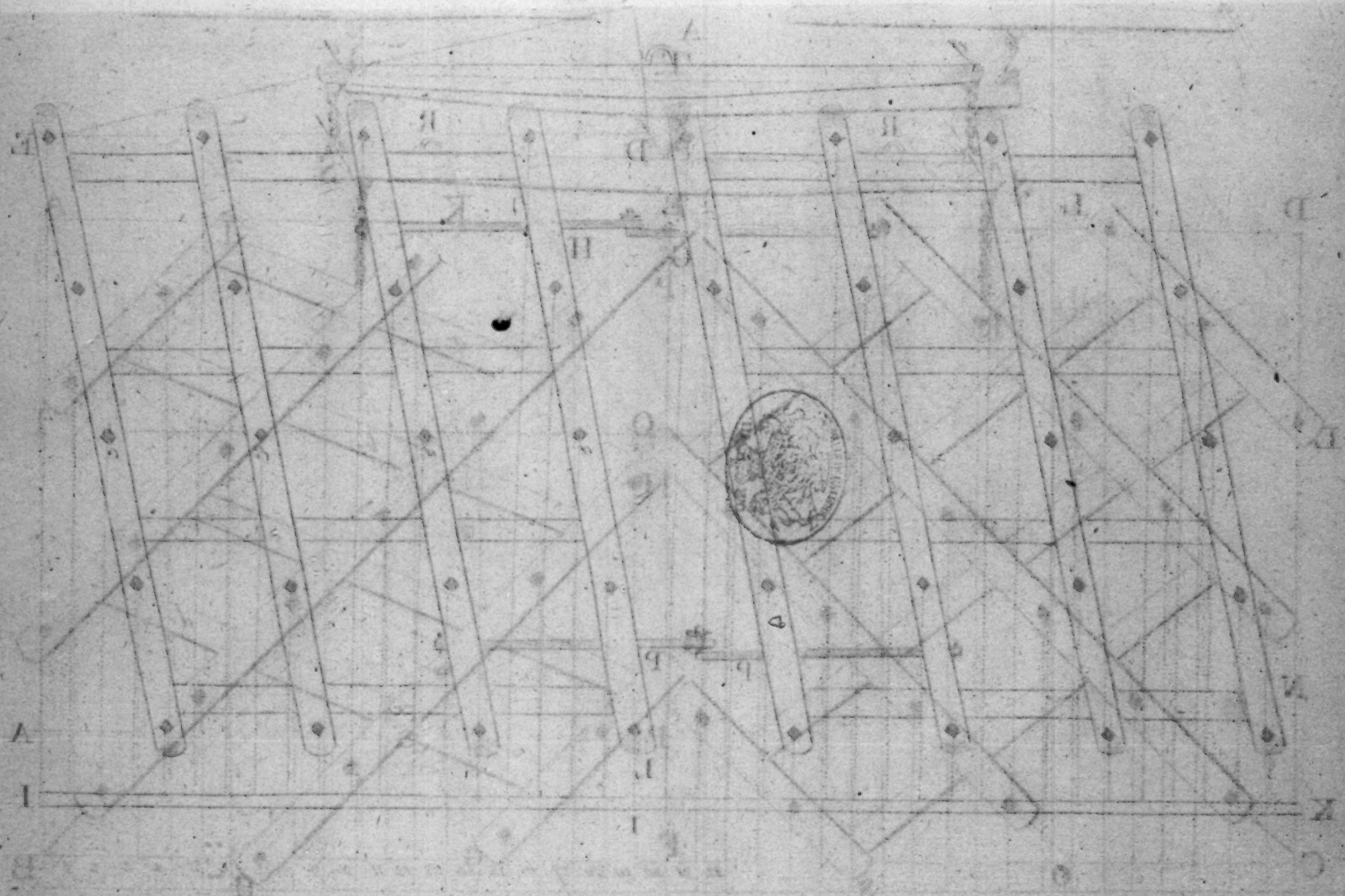
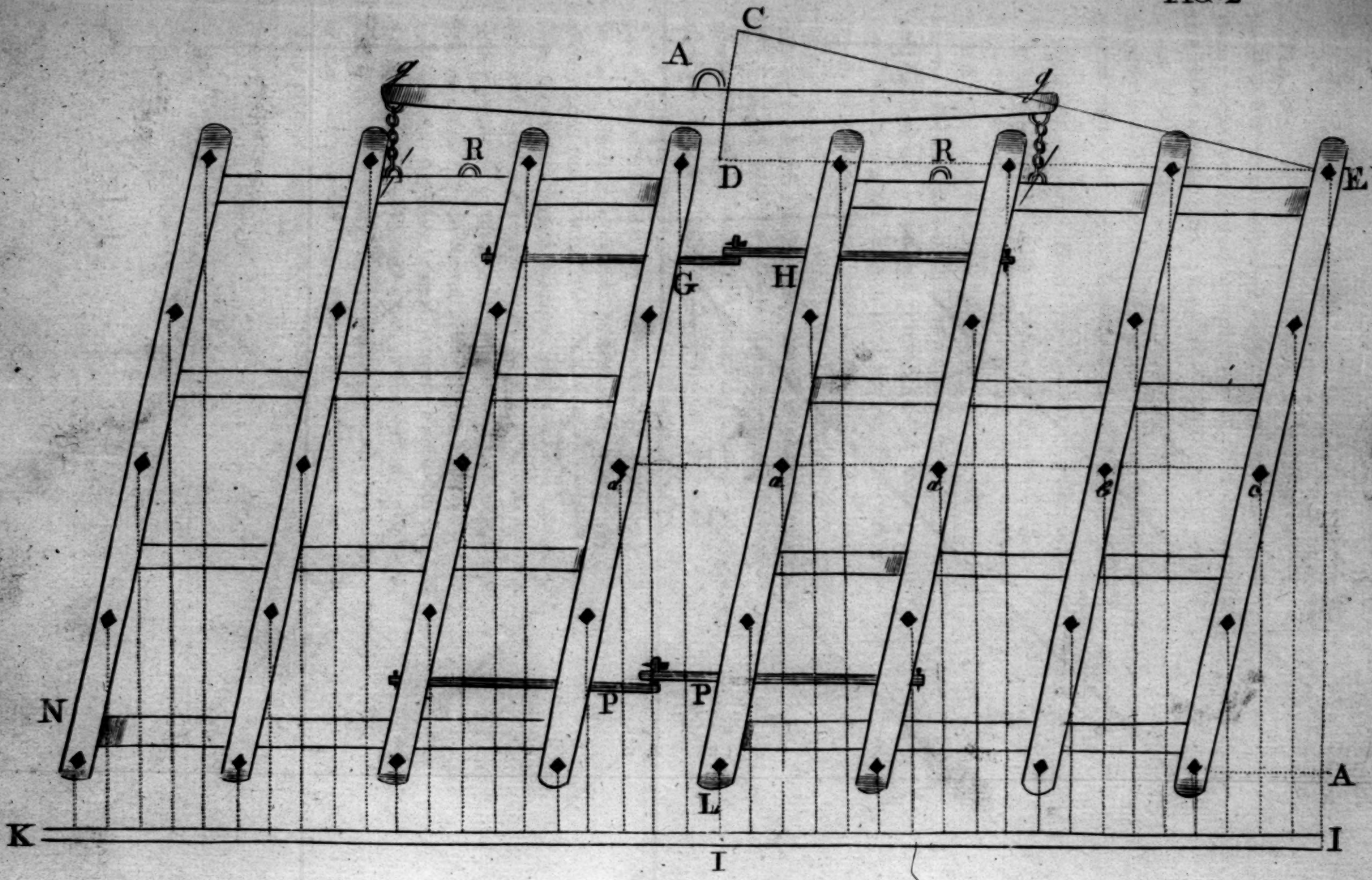
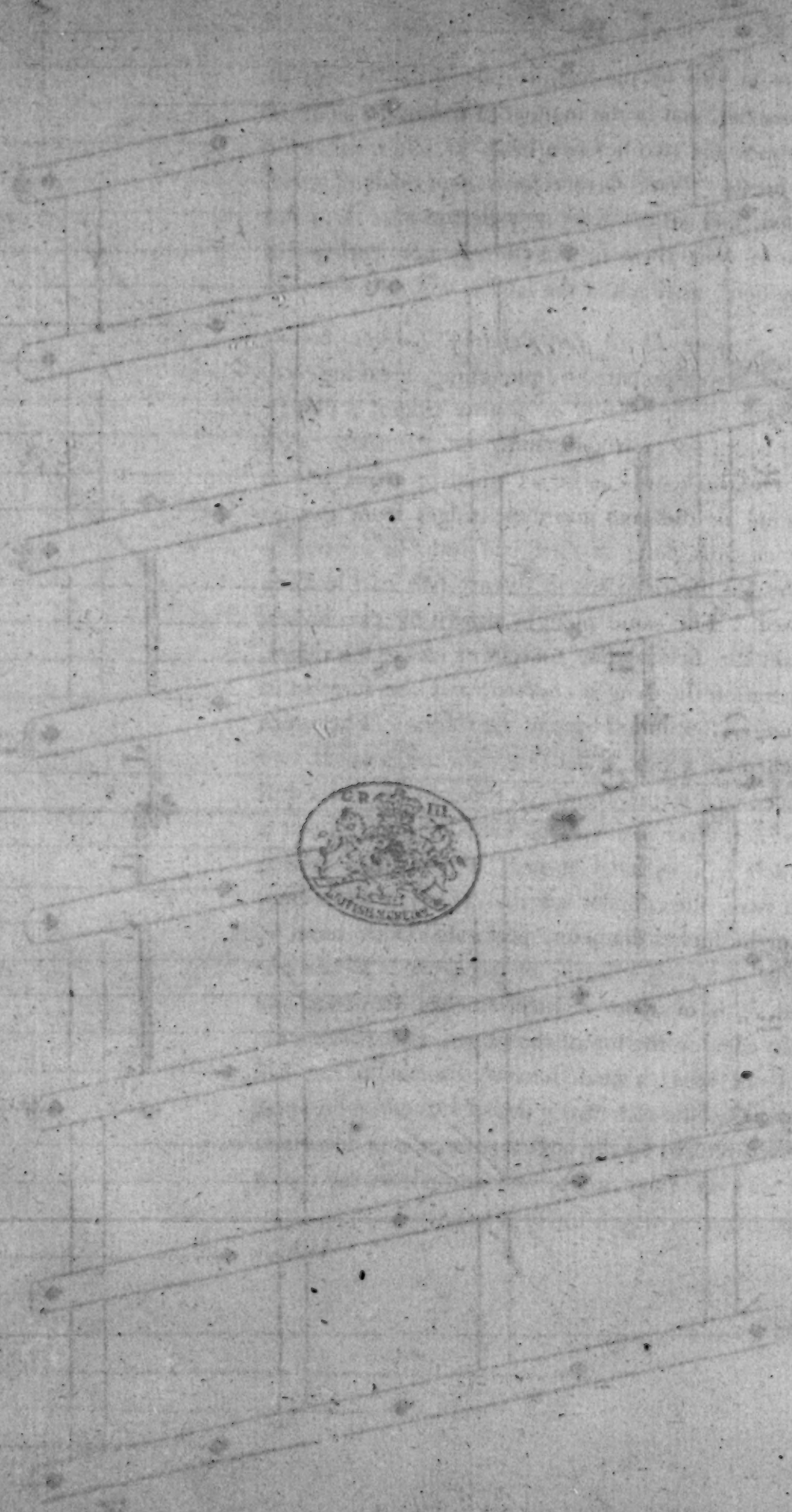


FIG. 2.





The rollers in use in the county, are different only in length and diameter, and in the manner of fixing the shafts to them; sometimes for two horses a-head, at other times for two horses a-breast. Some farmers have them made of stone, others of wood, and others have no rollers at all. It is not an instrument of general use in the county, nor perhaps of general utility here, as much of the land is wet.

Plough for forming Drills for Potatoes, Turnips, &c.—When the land is well prepared by ploughing, breaking, &c. for being ridged up into drills or narrow ridges, a plough with a mould board on each side, hung on the sheth with hinges, whereby the board can be set wider or narrower, is used for forming up the land into these ridges from two to three feet wide; the dung is then laid into the furrows as equally as possible: from fifteen to twenty-five cart loads to the acre is used. The same plough, drawn by two horses, is brought over the field again, to split or cleave the ridges, by which operation the dung is covered, and the furrows in which the dung is, become the top of the ridges. These tops are then levelled by a light roller that hits the tops of two ridges at once; and to the frame of the roller is tied a drill plough, of which there are various kinds. The simplest is the best, which is a cylinder turned upon a small wheel, oftener upon two; the cylinder is a small barrel of white iron, from six to eight inches diameter, perforated with holes to let out the seed in a proper degree of thickness. When one wheel is used, it is of about eighteen inches diameter, and rolls on a thin edge on the top of the ridges, and makes a rut sufficient for the seed: a small harrow annexed to the drill follows, and moves the soil among the seeds that are dropped, and as the horse returns by the next furrow, the opposite end of the roller rolls the ridge sown, and compresses the top or sharp pointed ridge on which the drill follows.

Where two wheels are used for the drill, they are at such distances as to take in the formed ridges between them: sometimes the cylinder turns round with the axle, and drops the seeds, having a small coulter before, to make a tract for them. The harrow and roller in both cases are the same.

In other drills, the cylinder does not go round, but has one hole to let out the seed, which is dropped into a funnel that conveys it to the top, or tract made in the ridge; the box is in a continual motion, from a crank that is moved by the spokes of the wheel. This is the best for windy weather; the former is the simplest, costing only about nine shillings; both do well, and among all the variety of kinds used, are the best for general use.

*Hoeing Plough.**—A small light plough, of the common form, drawn by one horse, goes along one side of the ridge, and turns off the earth from the young plants, and returns by the other side for the same purpose. The hand hoe next follows, once, twice, and sometimes thrice: it is from six to eight inches long, and at one stroke across the ridge, leaves the turnips thick enough, after the hoeing is repeated two or three times, if necessary.

The double boarded plough next follows, and turns up the earth again, on both sides, to the root of the plant. This generally finishes the turnip culture.

Carts—called close carts, for carrying lime, dung, coals, grain in sacks, &c. are about five feet ten inches long, and three feet four inches wide at bottom; the sides and fore part slope outwards two inches and a half, as they rise to the height of sixteen inches, and generally they contain twenty-two Winchester bushels and a half: they are mounted on wheels four feet eight inches, and drawn by two horses: many of them

* There are some of these ploughs now made to turn off the earth from both sides of the rows of plants at once: they answer well on light clean soils.

do not fold up (coup) to empty the load, the frame-work of the cart being mortised into the shafts, to make them light, more compact, and firm for long carriages.

Long carts are those used for leading home the hay, corn in the straw, wood, &c. consisting of two shafts sixteen feet long, framed together at such a width as will fit the length of the axle of the short carts, few farmers having complete sets of wheels for both kinds of carts. The body of the cart (being ten feet long) is framed with sheaths or rungs, which are bound together at the corners with what are called iron stays. They have outer side shelvings, to extend their breadth for receiving the greater load, and often the whole frame work is fixed to the shafts with screws, for the conveniency of taking off the body, or framed work, to use the bottom for carrying wood, &c.

Waggons.—There are a few waggons in the county, used for bringing home lime, coals, &c. They cannot be of general use in the husbandry of this county, therefore a particular description of them is unnecessary. All the other implements of husbandry are much the same in kind with those used in all the improved counties of Scotland. Fanners for cleaning the corns, are of the simple kind, and made by the common wrights in the country, at about 3l. sterling the pair: one man to drive and one woman to fill up, and two women to riddle, can clean thirty bolls of grain in a day, being put twice through the fanners, and twice riddled.

There are several threshing machines in the county: one goes with the wind; others are moved by four, sometimes six horses. They are not in general use in the county, and probably never will.

Weighing Machine.—The writer of these sheets invented a steel-yard, for weighing loaded carts of hay, &c. many years ago: it is useful to all farmers having considerable concerns, and it is handy, as it is easily carried from place to

place. It costs about six guineas, and with proper care will last many years; however, very few have been made in the county, though many of them have been sent to different parts of the kingdom, especially to the west thereof.

BEASTS USED FOR DRAUGHT.

THE ploughs are drawn by two horses yoked a-breast; the carts also by two horses yoked a-head; the common harrow by one; the break by two, sometimes by three or four; the roller by one, or two: the ordinary load for a two horse cart seldom exceeds twelve or fifteen hundred weight. One remark may be made, as to an increased expence of the article of fitting out a pair of horses for a cart and plough, beyond what our forefathers had any idea of: in place of straw collars (which, by-the-bye, are as good as any for the plough), traces made of hemp ropes, and back and belly bands made of coarse cloth, often wove by the servants of the farmer's family, are now used. There is now nothing to be seen but leather collars, iron chains covered with leather cases or pipes, leather back and belly bands, double breechings, &c. all made of the best tanned neat leather, stitched with white leather, and ornamented with fringes of woollen yarn of different colours. The cost of graithing a pair of horses for plough and cart, at this time, is equal to 6 or 8l. sterling, in place of 10 or 20s. the common rate formerly.

Two, or four, sometimes six, and even eight oxen, and two horses before them, were the force employed for one plough, in this county, in general, about thirty or forty years ago; and as an improvement, some adopted four oxen without horses; and at last two oxen were used in some particular cases. As the practice of limin· increase, more horses were required for bringing home the lime in summer (in

(in which season only it is be got) than were sufficient to carry the corn to market, and plough the land in winter. It was also found, that oxen were fitter to be laid on grass after a winter's idleness, than if they had been hard wrought on wet land, in which the county, as before mentioned, abounds. From these, and other reasons, they have been of late disused for the plough, except in a very few places, and some particular situations, such as the occupier having dry land, being near lime, having it by water carriage, being near corn markets, where many horses are not required to carry the crop to market, and having banky or steep land to plough. In all these situations, it is believed that there is a considerable saving in using oxen instead of horses. Two and four are the number yoked in a plough, which they draw with ease, but in general they go slower than horses; if they are drove fast they fall off, unless well fed.

A pair of horses at two yokings a day in summer, seldom plough above an acre in nine hours, and three quarters of an acre in winter in seven hours, which is rather little, when it is considered that a furrow of eight inches, the ordinary breadth, twelve miles and one-third long, make an acre; besides, the plough is not a heavy instrument—a power equal to 350lb. will move one under an ordinary furrow; a horse will travel with ease twenty miles a day, with a load on his back equal to this power; hence, a horse can carry much more than he can draw; but we generally confound the word draught with the operation of the draught: we say a horse draws 10 cwt. on a cart, but strictly speaking, the horse only moves the cart which carries that weight. The power applied or exerted by a horse on all the machines used in husbandry, &c. in many cases, is far short of the natural strength of the animal. This arises from the power being applied to the machines in an oblique direction, and exerted by the animal in a direction inclined to the horizon. This subject is well worthy of discussion, but we have not room for it here.

SEED-TIME AND HARVEST.

THE seed-time, in this county, as in many other counties of Scotland, depends on the season. Beans and cold seed pease are sown in February, if the season will allow; but it is often the middle of March before any can be sown; oats are sown in March and April; barley from the first of April to the tenth of May; and in the moor land districts, bear is sown all the month of May. Wheat is sown from the middle of September to the first of November, on clean fallow, and after turnips, it is sown all the winter through, when the weather will allow, down as late as the first of March; but there is very little sown so late. Some years ago a kind of seed wheat was introduced, which was supposed to admit of sowing in April, and to ripen with the common kinds. However, this kind has not succeeded in a way to recommend its general use. Hot seed pease, or Hastings, are sown from the first of March to the first of May. Rye is not common in the county. Tares are sown in March and April, but not in great quantities. They are cultivated chiefly for the purpose of green food for horses, after the first crop of clover is cut.

Potatoes are planted in April, but not in great quantities, except near the towns and villages. The farmers think them a very severe crop for the land, and therefore do not cultivate more of them than will answer the consumption of the families on the farm, with a few for rearing hogs, or giving to milch cows: the price seldom exceeds six or seven shillings the boll, of four heaped, or six sleeked firlots, during the winter.

Lint is sown in small quantities, for the use of the farmers' servants, cotters and shearers. The soil is not friendly to the growth of it, and it is reckoned a severe crop for the lands of this county.

The

The harvest on the Tweed side, and in some situations on the coast, begins with Dutch or early oats, about the first and second week of August; it is later on the more north-westerly parts of the county, by ten, twenty, and thirty days; and in proportion to the time the harvest is begun, so in general it is finished. The ordinary length of the harvest on each farm, is from fifteen to twenty-five days work. In most cases, and in most seasons, few farmers, with the strength sufficient for cutting down their corns in the course of twenty or twenty-four days, can go on from beginning to end, without being obliged to rest for want of ripe corn. In Lammermoor, the corns are often not all got in before the middle of November.

The grain is mostly cut down by the sickle, and in calculating the number of reapers necessary for the crop, eight or ten acres are allotted to each hand, which, in the ordinary run of crops, will be cut in sixteen or twenty days. Some farmers have tried the scythe for cutting down the corns, but none have continued the practice. Some tenants near towns have lett their crop to be cut, bound, and stooked up, for 4s. 6d. or 5s. per acre. Gaiting of oats, after being cut, is very much practised in the county: they dry sooner than when tied tight, and stooked up when new cut. The practice is, to cut rather green, and by being gaited, the oats ripen in the sheaf.

Turnips are sown from the first of June to the middle of July, and they are begun to be eat off with sheep in October, and to be drawn for cattle about the first of November; sooner or later, according to circumstances.

INCLOSURES.

Almost the whole, or two thirds, at least, of the lands in the lower district, are now inclosed, and a considerable part of the arable lands of the higher district.

It

It is not easy to be correct, at this period, as to the advantages that have been found to result from inclosing, in regard to the increase of rent, quantity or quality of produce, improvement of stock, &c. At one period, some years ago, in a case where a tenant was supposed to bring an action of damages against his landlord, for not inclosing the lands, in terms of the lease, at the time stipulated, these damages were held to be equal to a third of the rent paid for the lands. If this ratio be just, the landlord suffered by his neglect, as will appear by the following calculation:—To inclose one hundred acres of land into four fields, nearly square, will require about six hundred and eighty five roods, of eighteen feet and a half each: suppose the fence to be a five foot ditch, and hedge on one side, backed up with stones four feet and a half high, and copped with feal, which is a common fence, and none of the worst kinds, the expence would be about four shillings and sixpence per rood, or 154l. 2s. 6d.; interest 7l. 14s. Suppose the rent of these one hundred acres to be 15s. per acre, the third to be discounted is 25l. From this it appears, the landlord would lose 17l. 6s. yearly, for his failure in want of inclosing. The higher the rent of the land is, the more he would lose, and he could not be on equal terms, unless the land were rented at 4s. 6d. per acre. However, this allowance of a third is thought to be high, except in situations where the crops are exposed to much depredation. Open land, in equal heart, will certainly produce as great crops as if it were inclosed, unless in cases where the fences are to act as drains; but if the farm is to be occupied, half in grass, and half in tillage, uninclosed, the loss both on crop and stock will not be reckoned, in this county, much less than a fifth part of the rent: thence appears the advantage of inclosing to the proprietors: with respect to the advantages to the tenants, much depends upon the situation, and manner of farming of the land, but almost in every case, in the lower district, a tenant in ability, would rather inclose

the

the lands at his own expence, on a twenty-one years lease, than farm them as open grounds, suppose they were let as such; but this would not be the case in the higher district.

SIZE OF INCLOSURES.

THE size of the inclosures are as various as the size of the farms: they run from 10 to 100 acres, but, in general, 40 or 50 acres is reckoned a good size for a farm of 4 or 500 acres. In the progress of inclosing, and improvements in this county, some occupiers of land attempted to destroy the distinction of infield, outfield, and moor, by making square and regular inclosures, often taking parts of all the three classes of soil into the same field. However, those proprietors and occupiers of land who studied more the classing of the same kind of land into one inclosure, than the regularity of the inclosure, or their equality in size, have done best, as it is now found by undoubted experience, that the different classes of soil require different culture, to keep them in an improving state.

There are a great many kinds of fences in the county: where stones are to be got (but here there is a scarcity of them) stone walls are preferred on high lands; sometimes the fences are made by throwing out two ditches, nine feet asunder, making them five or six feet wide at top, three, or three and a half feet deep, nine inches wide at bottom; the earth thrown out of both ditches, is neatly formed into a sloping ridge or bank between the ditches, a row of quicks, three or four years transplanted, is set on each side, about six inches higher than the edge of the ditch, and nine inches back from it, so as to form a scarcement: this is called a double ditch, and costs, including the expence of thorns, 1 s. 10d.

10d. per rood of six ells. A dead hedge is generally placed on the top of the bank, which costs 2d. per rood, besides the expence of cutting and leading the thorns: others are made by one ditch and hedge of the same size and kind, backed up with stone, four feet and a half high, and copped with feal: this is called a faced dyke, and is esteemed the best kind, next to a stone wall; it costs from 4s. to 5s. 6d. per rood. Others are cut two and a half or three feet deep, and sloped, faced up with stone, and a hedge on top: this kind is used next fields that are skirted with plantations, and is executed at about 3s. 6d. per rood. Others have hedges planted on the top of a feal dyke, having a small ditch on each side: these are the worst kind, and have been long since given up, except on such grounds as will not grow thorn, but whin hedges. There is a great deal of the soil in the county not friendly to the growth of quick-set hedges, owing to the cold till bottom. The cleanness of the skin, and vigour of the thorn, are always held as a mark of the good quality of the land, and it seldom fails to be a just one. It is thought by some, that the pruning knife, or hedge-bill, is too much used. This may be the case, on some lands, where hedges thrive well, but in a great deal of the lands of the county, the hedges fog at the stem or root, and would entirely die out, were they not cut over within a few inches of the ground: however, where they do not require this cutting, from the above-mentioned cause, and where they keep close at the root, they should be allowed to grow up. Nothing can be prettier than a thorn hedge in flower, or in seed. It would in time, though probably at a remote period, add greatly to the beauty and value of the county, that hedge-row trees were planted without reserve, the expence being trifling.

POPULATION.

It is not believed that the inclosing of the lands, and the increasing the size of the farms, in this county, have decreased population; on the contrary, more hands are employed on account of the increase of the turnip husbandry, and of the produce of the lands, arising from improvements of every kind, than have been at former periods. The farm servants' houses are now brought closer together, and do not make such an appearance, as when their tottering huts were scattered over the country in an irregular manner; but, on the whole, it is thought that the number of inhabitants of the county has increased with improvements; in some small parishes, where great part of the lands in grass are let from year to year, or have been turned into sheep walks, the inhabitants may be fewer than at former periods, but they have not left the county, but gone to other parishes. Some of the tradesmen, masons, wrights, weavers, and shoe-makers, have gone to Edinburgh and Glasgow, on account of the high wages given there for these ten or twenty years past, but most of them, after two or three years absence, return again to the country. There has been for many years past, a scarcity of hands in this county for the business of husbandry, and this is at least one mark, that there is encouragement for the increase of population, especially as the wages are higher than in most neighbouring counties.

There are several villages in the county, built by tradespeople, mechanics, &c. on feu-rights, or long leases; and where the encouragement given to such settlers has been tolerably easy, the villages are all increasing in size, which is another mark of the increase of population. It does not appear that this county ever abounded in population. The number of souls in it at present, is about 30,000. The working people are much better clothed and fed than they were about thirty years ago.

COMMON FIELDS.

The common fields, run-rig, and run-dale lands, in the county, were all divided previous to any attempt to improve them by inclosing, &c. There are only two fields of any consequence undivided: one, a tract of a moor in Lammermoor, called Chirnside Common, used as a common pasture, principally for sheep, by those having interest in it. The proprietors having this interest, were called together some years ago, to consider of the propriety of dividing it, when it was thought not to be worth the expences of division, though that expence, before the Courts in Scotland, is very trifling, if none of the parties are disposed to be litigious.

The other is the outfield and moor lands belonging to the Royal Burgh of Lauder, consisting of about 1400 acres. The stop to a legal division of these, arises from minors, and absent burgesses. However, some years ago, the resident burgesses agreed to a kind of amicable and ambulatory division, since which time the face of the fields is wonderfully changed, by fallowing and liming. Dunse Common, consisting of 1400 acres, was the last divided common field in the county; part of it lies very high, and is not capable of improvement, but part of it, next to the town of Dunse, lying on a free dry bottom, has been much improved by small portioners, who got lots of it; and the value of it, in a very few years, has been raised from three and four shillings per acre to forty and fifty shillings.

DIFFERENCE OF RENT.

Already answered.

WASTE LANDS.

THE wet moor lands and moss in Lammermoor, are those that may be considered nearly waste; if they are not connected with other lands, they are almost totally so, but being connected with arable and pasture lands, lying in the valleys and burn-sides, they are considered of use as pasture for sheep. The mosses produce purlaing, which comes early in the spring, but, on the whole, great tracts of the moor and moss, especially where they lie low and flat, are not worth sixpence the acre. Some of the proprietors near the west end of both districts, have made the most of them, by feuing them out in small parcels of one, two, three, four and five acres, at 5l. per acre, besides drawing one shilling of yearly feu duty.

Planting would be of the greatest utility to Lammermoor, by giving shelter to the cold bleak hills and moors, and by improving the soil so planted. But there are many discouragements to planting in this tract: it is found that planting will not grow on any kind of soil on the summits of the hills, neither will it grow in moss; and there is a considerable part of the moor lands unfit for improvement, on account of the thinness of the soil, and the wetness and badness of the bottom, and upon these planting will not grow, as has been learned by experience in several situations: add to this, that it is very difficult to make fences sufficient to hold Highland sheep, especially where stones are not to be found. Planting thrives well on moors of a gravelly or rocky bottom, if they are not much exposed to winds; but a great part of the flat moor lands have something at bottom unfriendly to the growth of trees. It is believed that raising of whins and broom on many of the moors of the upper district, would be a considerable improvement: the sheep are fond of them, and they prove an excellent relief in a storm of snow, on account of their giving both food and shelter; and there are seldom any

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DIFFERENCE OF RENT.

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rotten sheep where the fields of whins and broom are considerable, especially in Lammermoor; though this is not the case in the Merse, the moor lands there get the blame when any rot appears among the sheep; probably this arises from the pasture growing on these lands not being sufficiently rich and nourishing for maintaining in good health so large a breed as are sometimes put to pasture on them. The hunger rot is a term generally understood.

RATE OF WAGES.

THE greatest number of ploughmen in the county, are called hinds, who have families, and live in houses belonging to the farm: their wages in general may be reckoned:

Ten bolls of oats, at 12s. - -	£.6	0	0
Two ditto barley, at 15s. - -	1	10	0
One ditto pease, - - -	1	0	0
Sheep money, - - - - -	1	10	0
A cow's meat through the year, - -	4	0	0
Firing led home, - - - -	1	0	0
One firlot of potatoes planted, - -	0	10	0
One peck of lintseed sown, - - -	0	5	0
Harvest meat, - - - -	0	12	0
Hens allowed to be kept, or - -	0	5	0
	£.16	12	0

The grain being higher this year than above stated, by three shillings per boll, the gains will be advanced 1l. 19s. or 18l. 11s. in all.

Herds in general have the same gains as the hinds, with this variation, that they have a certain number of sheep in place of sheep money, especially in Lammermoor: the number of sheep allowed the herds to be grazed along with the tenant's flock, depends on the nature of the pasture.

Hedgers

Hedgers are generally employed by the piece; the prices are various, according to the nature of the work: young hedges are cleaned, at from three to five shillings per hundred rood; switched at the same rates when grown up; ditches scoured, at from two-pence to six-pence the rood; old hedges cut, from a farthing to two-pence halfpenny; dead hedges neatly set at two-pence; paling put up, where the wood is to cut and split, at two-pence and three-pence per rood.

Unmarried men, engaged for ploughmen or carters, have from 6 to 8l. a year, and their meat in the house, or, in lieu of the meat, they get a stone of oatmeal and eight-pence a week; day-labourers have one shilling a day; for some time past they have got two-pence and three-pence more, on account of the labour carrying on in repairing high roads. Hay-mowing is generally by the piece, from one shilling and three-pence to two shillings and sixpence per acre. In harvest, the rate of wages to good reapers, by the day, is from one shilling to one shilling and sixpence, or, from twenty-one shillings to twenty-six shillings for the harvest: a woman shearer, through the harvest, is reckoned equal to the rent of a cot-house and yard; wages from ten-pence to one shilling a day, or twenty shillings for the harvest. House-maids for farm-work, from 3 to 4l. a year. Women, boys, and girls, for turnips hoeing, hay-making, weeding corn, &c. from four-pence to eight-pence a day. Wrights from one shilling and sixpence to two shillings a day. Masons the same: in winter they have four-pence a day less. Smiths are sometimes paid by the job, and weight of iron wrought; in some cases, they are paid by the horse, plough, &c. ten shillings for shoeing a cart-horse, and fifteen shillings for a chaise-horse, through the year, is common. Some farmers have a smithy, in which every thing is their own; they engage a smith a day or two in the week, to work up such work as may be waiting them. Where the operations of the farm

are

are steady, the smith, in some cases, takes the whole in his line per inventory, and upholds them at an agreed price by the year. The wright does the same. This is reckoned the cheapest way of being served with these two useful, though to the farmers, very expensive mechanics. Threshers are paid in kind, by receiving four per cent. or one boll out of twenty-five they thresh. Cleaning of the grain with fanners, when done by the piece, costs one per cent. or a firlot in twenty-five bolls. The thresher assists in cleaning the grain; he generally drives the machine.

Within these twenty years, the time of entering to, and leaving off work, has been considerably changed among the farm servants: formerly, the ploughs were yoked by sunrising, all the year round; in summer, the ploughmen got a rest, or sleep, in the middle of the day; lately, they have come to what they call gentle hours, entering to work at six in the morning, and leaving off at six in the evening, from the first of March to the first of October. If they do not get an hour's rest at nine o'clock to breakfast, they must have two to dinner. Day-labourers have long kept these hours, to which they were first accustomed from being employed by gentlemen, and living long within the sound of the six o'clock bell, or a mason's rap. Shearers (reapers) work in harvest from sun-rising to sun-setting. They have an hour for rest and breakfast, and the same at dinner; and some still keep up the old custom of giving fifteen or twenty minutes rest in the forenoon, and the same in the afternoon. The carters near the middle of the county, generally go off for lime about twelve at night, during the summer months; they are often fourteen and sixteen hours out: at distances which require this, the horses can only go three, or at most, four times a week. The Tweed-side farmers, who can send to lime or coals twice a day, have greatly the advantage in this respect.

DRAINING OF LAND.

THE fences in the county being mostly ditch and hedge, are generally laid in such directions as may be useful in draining the lands, and where these do not answer the purpose, open drains are made, leading into them. Some gentlemen and farmers have drained their fields, by making a number of drains, filled with stones, and covered so deep as to let the plough pass over them. But in general, this excellent and permanent improvement has not been carried to any extent in the county. The scarcity of stones, the stiffness of the soil, which does not allow water to pass under or above furrow, the barrenness of the moor soil, and shortness of the leases, are all bars in the way of this improvement.

Some of the rushy bottomed land in the county, owing to the bottom being a kind of hard puddle*, or mixture of clay and gravel, cannot be drained or laid dry by under or covered drains, even where there is plenty of stones, at least such drains will carry off no more water than what comes in the line of them; and this has been proved by making two drains of a given breadth and depth, parallel to each other, and at the distance of four or five feet, one of them being filled with water, and kept full, the other remained empty for weeks, if not filled from above, or sunk so deep as to reach a stratum of sand or gravel, which is often not within reach. Some of the bog land is improved by draining with open drains; some of it is reckoned the worse of being drained. There is, notwithstanding these unfavourable circumstances, many fields in Berwickshire that would be much improved by draining: the shortness of the leases, is one bar against the work being performed by the tenants in a masterly manner; but it is to be hoped the landlords and tenants will in time concert measures for extending this valuable improvement.

* A mortar made up by beating gravel and clay together, for embanking canals, or dam heads.

It

It is sometimes argued, that any improvement which will not pay expences on a twenty-one years lease, should not be undertaken: this is granted, with respect to the tenant, but it is to be noticed, that the lease is sometimes well run, before the more immediate necessary improvements can be made by the tenant, to secure him in the making pointed payment of the rent.

PARING AND BURNING.

This method of improvement has been tried on some plains of Benty Moor, in the lower district of the county, with advantage. It has also been tried on the higher district, but to no great extent. The rains and mists attracted by the hills, prevent the surface from burning, and it is only in a particular dry season that the operation can be performed in a sufficient manner, in this county. Paring is performed by the turf spade, and the work of paring and burning costs twenty-one shillings per acre.

WOOD LANDS.

There is not much natural wood in the county; about 200 acres may be the utmost extent. It is mostly dwarfy, and not seemingly in a thriving state, which cannot be easily accounted for: probably the allowing of sheep to pasture in the woods, soon after being cut or haged, is hurtful to the growth of it.

Most of the gentlemen's seats in the county are decorated with pretty well-grown trees, consisting of oak, ash, beech, elm, poplar, chesnut, larches, Scotch and spruce firs, &c. The weedings, hitherto, have been equal to the demands for the

the purposes of husbandry in the county, and no more. All the kinds are to be found of various sizes; from nine to twelve feet round will be among the largest of the oak, ash, beech, and elm. For these many years past, most of the gentlemen have been embellishing their estates by new plantations, many of considerable extent; and clumps, strips, and ring-belts, &c. have been planted in many parts of the county, which will soon add to the beauty and riches of it.

There is a want of hedge-row trees in this county; they seldom thrive well, and are always slow in growth, which is one reason of their not being so generally planted as they ought to be. It is alledged also, that they hurt the hedges, but this is not believed to be the case, unless where hedges surround thick plantations. On the whole, there are about 3500 acres of planted land in the county: much of this is affording at present, as it has done for many years past, a considerable yearly income to the planters or their heirs.

PRICE OF PROVISIONS.

A considerable part of the food of the labouring people in this county, depends on grain manufactured into flour meal, and shelled or hulled barley; the bread meal used by them, is barley and pease mixed, and ground together, two thirds of the former, and one third of the latter, form the mixture. The prices of grain are not very steady, as will appear from the following extract of the fiars of the county for these twenty-one years past.

EXTRACT OF THE FIARS OF THE COUNTY OF BERWICK, FOR THE YEARS 1772—1793.

Years.	Wheat. Lothian measure.	Merse Barley.	Lammermoor Bear.	Merse Rough Bear.	Merse Oats	Lammermoor Oats.	Pease. Lothian measure.	Oat-Meal, 8st. per Boll.
	Scots. £. s. d.	Scots. £. s. d.	Scots. £. s. d.	Scots. £. s. d.	Scots. £. s. d.	Scots. £. s. d.	Scots. £. s. d.	Scots. £. s. d.
Candlemas 1773 Crop 1772	11 6 0	9 0 0	8 0 0	8 8 0	7 1 0	6 0 0	7 8 0	8 0 0
—— 1774 —— 1773	12 8 0	8 0 0	7 4 0	7 8 0	6 15 0	6 0 0	6 0 0	7 10 0
—— 1775 —— 1774	10 8 0	8 5 0	7 0 0	7 4 0	6 9 0	6 8 0	5 16 0	7 8 0
—— 1776 —— 1775	8 16 0	6 18 0	6 0 0	6 6 0	4 16 0	4 12 0	4 16 0	6 0 0
—— 1777 —— 1776	9 0 8	5 0 0	4 4 0	4 17 6	4 12 8	3 13 0	4 10 8	5 3 4
—— 1778 —— 1777	11 4 0	6 18 0	6 0 0	6 6 0	5 11 0	5 2 0	5 10 0	6 0 0
—— 1779 —— 1778	9 0 0	6 12 0	6 0 0	6 6 0	5 14 0	5 0 0	4 10 0	6 0 0
—— 1780 —— 1779	7 10 0	4 19 0	4 10 0	4 13 0	4 7 0	4 4 0	4 0 0	4 13 0
—— 1781 —— 1780	10 16 0	6 6 0	5 14 0	5 14 0	6 3 0	5 16 0	5 0 0	6 9 0
—— 1782 —— 1781	9 16 0	6 0 0	5 2 0	5 14 0	4 19 0	4 13 0	5 2 0	5 17 0
—— 1783 —— 1782	12 16 0	12 0 0	10 0 0	10 16 0	9 0 0	7 9 0	11 8 0	11 8 0
—— 1784 —— 1783	11 0 0	9 9 0	8 8 0	8 14 0	7 7 0	7 0 0	6 16 0	8 8 0
—— 1785 —— 1784	11 8 0	9 0 0	8 8 0	8 14 0	7 10 0	7 0 0	8 8 0	7 16 0
—— 1786 —— 1785	10 12 0	8 2 0	6 12 0	7 4 0	6 6 0	5 8 0	6 8 0	7 4 0
—— 1787 —— 1786	10 4 0	8 0 0	7 0 0	7 14 0	6 12 0	6 0 0	8 0 0	7 16 0
—— 1788 —— 1787	10 16 0	8 8 0	7 10 0	7 4 0	6 12 0	5 8 0	8 0 0	7 4 0
—— 1789 —— 1788	11 8 0	7 0 0	6 0 0	6 8 0	5 0 0	4 8 0	5 4 0	5 14 0
—— 1790 —— 1789	12 16 0	9 0 0	7 10 0	8 8 0	6 6 0	5 0 0	7 4 0	7 4 0
—— 1791 —— 1790	12 8 0	8 14 0	7 4 0	7 16 0	7 4 0	6 12 0	8 0 0	7 16 0
—— 1792 —— 1791	11 4 0	10 0 0	9 0 0	8 8 0	7 4 0	6 3 0	6 16 0	7 10 0
—— 1793 —— 1792.	11 8 0	11 0 0	10 4 0	9 18 0	7 10 0	6 12 0	7 12 0	8 8 0

The grain produced in the county, unless on some lands reckoned remarkably good, seldom or never brings so high a price in the market as that produced on the east coast of Scotland, or in the Carses. The butcher meat of all kinds is good: it sells always dearest in the spring months—beef from three shillings and eight-pence to five shillings and four-pence per stone, Amsterdam weight; mutton from two-pence half-penny to five-pence per pound; lamb and veal about the same price; pork from three shillings and six-pence to five shillings per stone; a fowl ten-pence; eggs from three-pence to six-pence per dozen: a great number of these are picked up by hawkers, who sell them at Berwick to be shipped for the London market.

The east part of the county is well supplied with fish, especially cod, codlings, ling, skate, holybut and crabs, there being several stations on the coast for fishing boats. Cod and ling fish, weighing from ten to fifteen pounds, sold on the shore last summer, from five-pence to eight-pence each, and when carried twelve or fourteen miles up the country, they sold at ten-pence and fifteen-pence.

The shearers in harvest get porridge and milk for breakfast, and ale and bread for their other meals: a Scotch chopin of small beer, and a loaf of wheat bread, makes a hearty meal: the ale costs one penny, and the loaf one penny three-farthings.

ROADS.

THE two London roads passing through this county, the one by Berwick, Ayton, &c. the other by Coldstream, Greenlaw, &c. with a branch by Lauder, are in excellent repair, and have been productive of much improvement to the county since they were made. The tolls on the Greenlaw turnpike

road, were let, from Whitsunday 1793 to Whitsunday 1794, at 945l. The annual expenditure for keeping up the roads, and expences attending the trust, may be about 600l. leaving better than 300l. for a sinking fund, and for paying the interest of 1000l. being the debt now owing. The toll on Coldstream bridge, connected with this road, is let for the same period, at 251l.; there is a debt of 2133l. 4s.; an yearly allowance of 14l. 6s. for the loss of the ferry-boat; and the repair, and other expences, at an average may amount to about 40l.

The Pease bridge, and London road by Berwick, connected with it, was built, and the road made, by subscription, aids from government, and allocations from the statute-service funds, which, with 1000l. borrowed on the credit of the tolls, amounted in all to 5132l. It is kept in repair by tolls levied at two bars, on powers granted by a separate Act of Parliament. The tolls let at 293l. The expence of repair, interest of 1000l. borrowed, and management, are about equal to the tolls, and it is supposed that a sinking fund cannot be established before the year 1800. Before the year 1772 the cross-roads were in a very bad state, and then rendered much worse, from being inclosed. All the grain carried to market was borne on horses backs, and the coals were carried the same way in winter. In 1772 an Act was obtained, for erecting certain toll-bars on the cross-roads in the county, and for converting the statute-services into money. This Act was opposed by many gentlemen in the county, on the ground that there was no thoroughfare on these roads, and that coal and lime should be exempted from paying toll, because they could only be had in summer, when the roads were passable, and the Tweed fordable. The bill sent to Parliament, was altered by compromise before presenting. This so hampered the trust, that no toll-bars were erected, except one on a trial, when the Act was nearly expiring. The statute-services were converted at five shillings for every horse,

horse, and two shillings and six-pence for every mare having a foal, in the county; three shillings for labouring, or farm servants; one shilling and six-pence for a cottar renting a house below twenty-five shillings, and three shillings for house-holders paying a rent above twenty-five shillings. This produced, in the year 1774, 1535l. 7s.; in the year 1775, 1493l. 13s.; and lately the rate of horses being raised to seven shillings and six-pence, the amount of the statute-service is now about 1832l. These sums, though applied faithfully to the roads making and repairing, have still been found inadequate to the work. The money is applied parochially, but has been so much divided among the different roads, and laid out in small sums, in all directions of the compass, that it has been found unequal to repairing and keeping up the cross-roads.

In 1792 a new turnpike Act was obtained, after a slight opposition. The tolls erected in virtue thereof, are let this year at 700l. There has already been expended about 3000l. in obtaining the Act, and putting about forty-three miles of road into repair. The annual expence cannot be exactly estimated, but for keeping up these forty-three miles, and paying for management, it may be supposed 230l. yearly. Many intelligent men suppose, that of all other methods of making and keeping up roads, that by turnpike is held, in general, to be most equal; because the traveller only pays for the road when he uses it. The principal objection is the expence of erecting toll-houses, and levying the money; but no fund can be collected without expence, and the traveller will the more cheerfully pay his share of the expence of levying this tax, as he knows it to be equal. It is however unfortunate, that there were suspicions entertained in the country, that this Act was partial, and that in some instances it might be partially executed by the trust. But there must ever be a great difficulty in erecting toll-bars on a number of cross-roads, so as to appear, or be perfectly equal: it is to be hoped, however,

ever, that experience will correct any real fault in the placing of the toll-bars, and that every person connected with the county, will rejoice at the prospect of having good roads.

One remark more shall close this article. The lands in the county, for the most part, are in lease to tenants, and, at an average, the leases may be within less than ten years of expiring. Therefore, at the outset of levying tolls, which are wholly paid by the inhabitants in the county, it is thought that the trust should not establish too great a sinking fund, but rather lay out more money in repairing roads, otherwise the present occupiers of land pay too high for the benefit of their successors, and of those who are just entering on new leases.

FARM HOUSES.

The farm houses and offices, formerly, were mean huts built with stone and clay, and covered with thatch and divot; two or three farm steadings were often found together in one village; this had, no doubt, been originally adopted either with a view to protection, or society, perhaps to both. In general, now, they are well situated, and substantially built. All the modern farm houses are two stories high, covered with slate, and have from four to eight or ten apartments, with an out, or back kitchen; several of the houses are neat and handsome, and, in some cases, the tenants are thought to be exceeding in the article of fine houses, fine furniture, &c.; however, when this is narrowly examined, the excess, if there be any, is not great, nor yet (to the detriment of improvement in agriculture) extensively diffused over the county. Two or three thousand pound capital engaged on stock, and outlay for labour and improvement of a farm, entitles the possessor to be comfortably lodged: if this could not be the case,

case, he would certainly follow another business than that of farming.

The offices are likewise now made substantial and convenient; many of them covered with pantyles. Where an onstead requires to be renewed, or removed to a more convenient situation, on account of the increase of the size of the farm, the tenant is always taken bound to lead all the carriages, which he agrees to without reluctance, on account of his getting additional accommodation. In some cases, the tenant accepts of a sum, for which he agrees to build or renew the onstead. On a farm from 3 to 500l. a year, it costs about a year's rent.

LEASES.

The length of the leases, in general, is nineteen or twenty-one years. In cases where a tenant agrees to give a great rise of rent, and ties himself down to considerable improvements, by inclosing, building, &c. they are lengthened out to twenty-five and thirty years. The covenants as to management of lands, are various, according to the nature of the soil, and the situation it is in with respect to improvement: they are generally calculated, sometimes *twisted*, to meet the ideas of the proprietor and the tenant, at the time of making a bargain for a lease. Where care is taken, and ability employed, the articles are adopted which are best calculated to keep the soil in an improving state; and there is scarce any such practice in the county, as in some others in Scotland, of letting old rich grass lands out to plough on a short lease at a high rent: the distance of lime, the want of dung, and the difficulty of restoring the land to its former state, or rent, forbid the practice. There are instances in the county, of high improved lands having been let on loose articles, merely for

for the sake of getting one or two shillings per acre more rent promised, at the time of letting, without the proprietor or the letter considering or believing that the rent, though not immoderate, could not be supported at an after set of the lands. This has been, and will be the case, where lands not originally good, are let at their full value, and where the articles, and choice of a tenant, are not held to be of much consideration, and must give way to one or two shillings per acre more, though only nominal rent. It is of consequence to the improvement of the county, that instances of a conduct of this kind are rare.

The articles of management should always be fixed in the first place, which brings forward the different offerers for the farm on an equal footing. And it is believed, where the lands are improved, that these articles, for a wet heavy soil, and variable climate, should be confined to forbid, but not to direct; the directory part of leases being only necessary where improvements are in their infancy.

The articles in common are, the lease, twenty-one years; entry to houses and grass-lands on the 26th of May, and to the tillage land, at the separation of the crop of that year from the ground. Rent payable at two terms in the year, Martinmas and Whitsunday, by equal portions: the first term payable at the end of six, twelve, but oftener eighteen months, and in some cases, twenty-one months after entry to houses and grass, and the second terms payment six months after the first. The tenant receives the houses in good repair, and upholds, and leaves them in such repair, at his own expences. In some cases, he is allowed wood and workmanship. He, in general, upholds the whole of the fences, in some cases, only the half. He is taken bound to have the half of the lands always in pasture grass, at least towards the end of the lease; one-fifth, or one-fourth part of the tillage land, is yearly in fallow, or turnips; one-fifth, or one-fourth, under a green leafed crop. Wheat is not sown above once

between

between fallows, and oats and wheat are not allowed, in general, to be sown after oats or wheat. The fallow break is manured with dung or lime, sometimes with both, and all land sown up with grass-seeds, in most cases is sown with the first crop after fallow: at the end of the lease, so much of the grass is left a specified number of years old. Straw, steel-bow, kain, carriages, and other services, are for the most part abolished, and the tenant pays no public burdens, except the half of the poor's rates, and school salary, unless it be by express stipulation. The conversion of the statute labour being now eighteen shillings for a plough or cart, of two horses, is complained of by a certain class of the tenants, who evade it as much as possible.

Grass-lands, or parks, are let from year to year; entry in May, remove in November or December. Rent payable at Martinmas first after entry: the taker's grant bill, with caution, for the rent, and in general this is a well paid rent.

In Lammermoor, it is common to restrict the tenants from ploughing above a third of the arable lands. In cases where the landlord allows the tenants prime cost of lime, they are taken bound not to take above three crops before sowing off with grass-seeds. The moor land ploughed up, fallowed, and limed, is generally left without restriction, which has been the ruin of it in many places.

The following leases are selected from different parts of the county.

ARTICLES OF AN EXISTING LEASE IN THE LAMMERMOOR DISTRICT.

Assignees and sub-tenants are excluded: entry to houses and grass at Whitsunday, and to the arable lands, at the separation of the crop of that year. Rent payable at Candlemas (nine) and Lammas (fifteen months) after entry, in equal portions, for the first year's possession, and so on thereafter, with a fifth part of the rent of penalty in case of failure. The

tenant to have the whole of the lands, that are dry, and fit for lime, limed at the rate of 25 bolls of shell lime (Lothian measure) per English acre, before the expiration of the first twelve years of the lease, all at his own expences. Not to sow any wheat or rye, except what may be necessary for the use of the family; nor oats after oats, except the first two years after liming, and never to take above two white crops running, without a green crop or a fallow intervening. To have the half of the whole in grass the last five years of the lease, and to be left in grass. Tenant prohibited from selling straw or chaff, except the last, or waygoing crop. The tenant, in consideration of a sum received, accepts of all the houses as in good repair, and obliges himself to keep them up, and leave them in the like good repair. The lands to continue thirled to the mill of ; and liberty is reserved to the neighbouring tenants, to cast and win peats in the mosses on the farm.

ARTICLES OF AN EXISTING LEASE AT THE TWEED-SIDE, AND ABOUT THE MIDDLE OF THAT DISTRICT.

Assignees and sub-tenants are excluded: lease twenty-one years; entry at Whitsunday, as to houses and grass; and at the separation of the crop of that year from the ground, as to the arable lands. Rents payable at Whitsunday and Martinmas, by equal portions, the first payment at Martinmas (eighteen months), and the second terms payment at Whitsunday (twenty-four months) after entry, with a fifth part more of each terms rent in case of failure, and the legal interest of said rent, from the respective terms of payment till paid. Not to have above the one half of the lands in tillage in any one year of the lease, and such land as is kept in tillage, must be in five regular breaks, one of which to be yearly in fallow or turnips, another to be under a green crop, such as pease, beans, or broad clover; the remaining three divisions may be white corn, but wheat is not to follow wheat

or

or oats, nor are oats to follow oats above once, and that only when land is new broke out of grass; all the land laid to grass must be sown off with a sufficient quantity of clover and rye-grass seeds, and no part of it is to be hayed above once, after being sown off; and at the end of the lease, the one half of the grass must be left three and four years old, and all of it in whole fields, as near as may be. Straw and chaff steel-bow —to consume the whole upon the farm yearly, for manure, and not to sell, gift, or burn any; and to leave the whole straw and chaff of the last, or waygoing crop, together with a year's dung, and a fifth part of the land in tillage for a fallow break, all for behoof of the proprietor or his incoming tenant. The houses and fences received as in good repair, and to be upheld, and left in the like good repair, at the tenant's own expences; and in case the tenant neglect to keep the same in proper repair, liberty is reserved by the proprietor to employ workmen to do the same, when and where necessary, and to charge the tenant with the whole cost thereof, as the same shall be instructed by the workmen's receipts.

ARTICLES OF AN EXISTING LEASE NEAR THE MIDDLE OF THE LOWER DISTRICT.

Assignees, and sub-tenants legal and voluntary, are excluded: lease twenty-one years; entry at Whitsunday, or 26th May, as to houses and grass land; and at the separation of the crop of that year from the ground, as to the arable land. Proprietor reserving all lime or free-stone quarries, and metals, minerals, and fossils, with liberty to search for, and carry away the same, upon allowing the tenant such surface damages as shall be found reasonable by two men of judgment and skill, to be mutually chosen by landlord and tenant. Liberty also reserved by the proprietor, to take off
acres, for the purpose of planting in corners, clumps or strips, on allowing the tenant the stipulated rent for each acre so taken off. Landlord always keeping up the fences of said

plantations at his own expence; likewise, reserving liberty to the said proprietor to plant hedge-row trees or willows, and to cut and carry away the same, as well as those already planted, when he chuses. Rent payable at Martinmas (six months) and Whitsunday (twelve months) after entry, being forehand rent, with a fifth part more of each terms rent of liquidate penalty, in case of failure, together with the legal interest of the said rent from the respective terms of payment till paid. Tenant to enter to the houses in good tenantable repair and condition; therefore he is expressly bound to keep up the same in good and sufficient repair yearly, during the lease, and to leave them in the like good repair at the end thereof, or his removal from the farm, all at his own expences. Fences to be upheld at mutual expence, the landlord having it always in his power to employ workmen to execute the repairs, when and where necessary, and to charge the tenant with the half of the cost, as the same shall be instructed by the workmen's receipts. Tenant bound to keep at least one third of the lands in grass, during the first ten years of the lease, and the one half during the other eleven years; and at the end of the lease, to leave all the grass land lying contiguous, and in whole inclosures, as near as may be. No part of the grass land to be hayed above once in three years. One fifth part at least, of the tillage land, must be yearly in fallow, or turnips, and must be properly manured with lime or dung; and at the end of the lease, or the tenant's removal, there shall be acres of tillage left for a fallow break, he having received one at his entry. Wheat or oats are not to follow wheat or oats, nor are oats to follow oats. Straw steel-bow, and to be consumed yearly on the farm, and not to sell, gift, or burn any.

COMMERCE.

THERE is little commerce in the county, but what arises from the business of husbandry, and grazing, or feeding black cattle and sheep; the exports from Eymouth being chiefly grain and meal, and the imports, timber, iron, slates, pantyles, grass-seeds, salt, grain, rags, lime, and lately, coal.

The grain from the east part of the lower district of the county, which is by far the most productive of that article, is shipped at Berwick or Eymouth, and carried coastways, to the amount of 11,745 quarters annually from the port of Eymouth, for these two last years; and from the port of Berwick for the year preceding October 1793, there were shipped 10,984 quarters of wheat, 11,244 of barley, 27,289 of oats, 391 of pease, and 463 of rye; the half of the wheat and oats, and two thirds of the barley, shipped at this port, it is supposed go from Berwickshire, the rest from Northumberland. It is also supposed, that this state is rather full to average upon, the shipments of wheat and oats having been more than usually large for last year.

From the west end of the lower district, and the north district, the grain and meal are carried to Dalkeith, Edinburgh, Haddington and Dunbar; and the carriages return with coals, lime, wood, iron, tar, pantyles, slates, &c. The commerce, if it deserves that name, carried on between the graziers, butchers, and breeders, in this and the neighbouring counties, is considerable. Great part of the stock is purchased for driving to England, all the summer season, and the great markets of Edinburgh and Morpeth take off all the fat cattle and sheep that can be spared during the whole year, to a very great extent in point of number and value. Many of the people employed in buying up this stock, both lean and fat, keep no accounts, so that it is almost impossible to ascertain the quantity, at least it would require an attentive observer or

two

two a whole year, to do it: it must be considerable, as there is not above 8000l. value killed in the county yearly, and we have supposed that the difference between the buying and selling prices, through the year, added to the value of the wool produced, and a year's increase of the value of the whole cattle and sheep in the county, is equal to the greatest part of the real rent: we do not include work-horses, that being a losing stock, which the grain has to support.

The best way to ascertain the whole stock, or capital engaged in the husbandry of the country, perhaps will be to reckon that 1 l. rent requires a capital of 4l. sterling to produce it; that this data is strictly true in most cases, will appear from the following statements: grass-land at twenty-five shillings per acre, will require an ox at 10l. value for the eatage of two acres for the season, and at twenty shillings per acre, a beast at 8l. value will be sufficient. At ten and fifteen shillings per acre, the value of the stock will be lower in proportion. Four sheep to an acre, at the top of the grass on the twenty-five shilling land, will be worth 5l.; on the lower rented, at twenty shillings, 4l.; on the middling class of land, viz. from ten to fifteen shillings, the value will be also in this proportion. A proportion of the out-field land, improved by lime, and the improved moor-lands in the lower district, are employed in pasturing of different kinds of ewes, for the purpose of feeding the lambs; no profit is expected from the ewe, the selling price seldom exceeding the purchase price, and it takes the wool, to herd and make up for the fall or loss of the ewes, which die in lambing, diseases, &c. Land thus employed, and good land kept in tillage, which require little more than seed and labour before the tenant gets hold of the produce, are the only classes that can be stocked at a less sum than 4l. for 1 l. rent; but this will be over balanced by the high-priced stock kept by the breeders on good land, and by the value of stock for feeding on turnips, which often amount to 12l. and 14l. per acre. The expence of fallowing and manuring

manuring the middling class of lands kept in tillage, will be fully up to this average of 4l.

In Lammermoor, the common way of estimating the value of farms, is by the quantities of sheep they keep. The rate, thirty or forty years ago, was one shilling and sixpence each sheep; it has lately risen, on account of bettering the pasture, and the advance of the price of stock, to two shillings and sixpence, three shillings, four shillings, and four shillings and sixpence a head. Take the moderate rate of two shillings and sixpence, it requires eight sheep to produce 1l. rent, and the value, at ten shillings a sheep, will also be 4l.

This calculation seems to be pretty well founded, in ascertaining the value of the stock or capital necessary to produce the rent of the county, which at present is about 112,000l. sterling, and deducting therefrom about 5000l.* supposed to be in the hands of the proprietors, there remains 107,000l. in the hands of the farmers, and to produce this rent requires a capital of 428,000l.—Over and above this produce, there must be a further produce for the interest of the money, and for all other necessaries for the farm, servants, &c. Add to this, that the salmon-fishing on the Tweed, within the county, rented at between 6 and 7001. a year, also requires a capital of about 4l. for 1l. rent, to carry the fish to the market, and support the trade therewith connected: but part of this capital is employed within the town of Berwick, where the fish is sent to be prepared by the coopers for the London market, and is blended with the capital necessary to produce a rent of 2400l. paid for the fishings within Berwick bounds, on the north side of the Tweed, and with the whole of the fishings on the south side thereof.

* This is supposed necessary for the table, the dairy, and stud of horses for saddle and carriages, but is not meant to include the lands farmed by these gentlemen, as some of them farm considerably.

The

The rent of land, in the lower district, in farms, runs from seven shillings and sixpence per acre to thirty shillings.—The greatest proportion from ten to twenty shillings the English acre. Near towns and villages, it lets from thirty to fifty shillings; grass inclosures let from fifteen to forty shillings; last year some good old grass-lands were let at 3l. per acre; but this is thought to be much beyond what it can pay, being taken merely for conveniency of relieving the farmers of an over stock of young cattle, some times dyke-leapers at home.

The produce of the crops in the county is not taken high in general; a middle crop in the lower district is supposed to be

Four bolls of wheat
Four bolls of barley
Five bolls of oats
Two and an half bolls of pease
} to the acre.

In Lammermoor, a middling crop is taken at

Three bolls of bear
Three bolls of oats
One and an half boll of pease
} to the acre.

The wheat and pease in this county are measured with the same measure as oats and barley, and the firlot in general use, is about a thirty-one part more than the Linlithgow standard barley measure.

Some of the lands produce considerably above this rate, but at an average, not more than stated. This may lead to a conclusion that the lands in the county are not remarkably good. Along the Tweed, and some parts of the coast, on the banks of the Eye, Whitater and Blackater, and near most of the gentlemen's seats, and ancient villages and towns, there are to be found many fields of good land; and where any thing of the name of kirk, croft, glebe, orchard, mains, garden, abbey, haugh, dovecote, is attached to, or makes part of the name of the field, they are best. On the whole,

there

there is a great proportion of poor land in the county, independent of the hills of Lammermoor. The surface looks tolerable, intirely from good husbandry.

MANUFACTURES.

THERE are two paper-mills in the county, on a great scale, and one on a small scale; both carry on a brisk trade; several manufactures of woollen cloth, on a small scale, and mostly for home consumption; two considerable bleachfields, and a number of weavers, who are mostly employed by the Edinburgh and other manufacturers, who send to them lint, and receive yarn, green, or white cloth. There are several breweries for home consumption; one distillery, at Brownsbank, near Eymouth, from which was shipped in the year 1793, 18,745 gallons of whisky, value 4,687 l. There are several tanners, but since the beginning of the American war, when a great export of shoes from the county stopped, the tanners dwindled to a few for tanning for country use. There have also been a starch work, and some soap works, carried on to a considerable extent; but all of them have been lately given up. There are a number of mills in the county, where a brisk trade of manufacturing grain into flour, and hulled barley, is carried on; but few of the millers make rich, and the erecting of mills has not been a good concern to the proprietors.

There are two lint mills in the county, pretty well employed; but the lint sent to them by any one person, is in such small quantities, as to make the dressing and keeping together the different parcels very troublesome. The paper mill mentioned as being on a small scale, is connected with one of these lint mills, and there is a strong cartridge paper made out of the refuse of the lint, which is turning to account an article formerly useless.

It has been long thought by some people, that this county was favourable for the settlement of manufacturers, on account of the quantity of provisions of all kinds to be had at all times at reasonable rates; but the distance of coal, and the badness of the roads hitherto, are thought to have been against them. With respect to the advantage arising from the introduction of manufactories on a large scale into the county, the matter is doubtful: they raise the price of labour, and corrupt the morals of the working people; there is, besides, a scarcity of hands in the county for the business of husbandry; and were these manufactories to be established, a number of strangers must be introduced.

USEFUL PRACTICES.

MANY of the common practices in husbandry are before enumerated, and were they to be followed in other districts of Scotland, less cultivated, a benefit would arise from the imitation. The general use of the plough drawn by two horses, is a great saving in tilling the ground; and it is astonishing that the practice makes its way over Scotland so slowly.

SOCIETIES.

THERE are no societies instituted in the district, for the improvement of agriculture. The farmers meet in the market towns, on market days, for the purpose of selling and buying grain and stock. They generally dine well at eight-pence, or one shilling a head, and drink heartily, spending on the whole from one shilling and sixpence to two shillings and sixpence each. They are so divided among the different public houses in the towns and markets to which they resort, as

to prevent much useful communication from going on. But in general, the tenants in the county are not communicative in any matter relative to their own business; every one endeavours to be as silent about it as he can; and in a cattle market, it is difficult to find out the real price of a beast bought or sold, unless it be by a near neighbour or intimate friend. There is a great difference among them in point of knowledge, fortune, and good breeding, and any general association would be distressing; but even among those nearly equal in these respects, a silence and jealousy prevails. In small circles, they are much happier with one another than in great ones, and the most of them are friendly and hospitable, though on the whole, it may be said there is not much society among them. It is not the business of the writer of these remarks, who has received as much civility from the farmers as any man, to point out the cause of this; he has only to say, that in his opinion, the establishment of societies among the farmers, as in many other counties in Scotland, might be of much use to themselves, in bringing forward useful improvements in agriculture, and regulations in matters of police, where they are concerned. Small circles may plan useful regulations, but they are generally counteracted by another small circle. It is only full meetings, made in concert with the gentlemen in the county, that can carry useful regulations into effect. If it had not been for a meeting of this kind, a few corn-merchants, or buyers, would have counteracted the whole of the farmers of the county, in their attempt to abolish the boll on the score, some years ago; and a few of the hinds in the county, would have baffled them in their attempt last year, to change the hiring markets for servants, from the first of January to the first of March.

Last year there were some associations entered into, by the principal breeders of stock in the county, for the purpose of counteracting an association formed by the breeders in Nor-

thumberland, with a view, as was supposed, to monopolize the tup trade; but these associations in the county are looked to by some with a jealous eye, as there is a suspicion that they are formed with a view to take the trade out of the hands of one set of men, and put it into another. However that matter be, the country has been obliged to them, as tups were had last year, at little more than half the price of former years.

SPIRIT OF IMPROVEMENT.

THE spirit for improvement in the county, is very general. It is sometimes crushed by a racked rent; it is also sometimes crushed from tried tenants getting no preference, when their lease is out, to an entire stranger on the estate; so that it is too often a remark in the county, "the more you do for "your farm, the less chance you have to get a renewal of "your lease." This, however, is by no means the general practice of the proprietors of this county. A spirit of improvement cannot be better excited, than by a confidence and good understanding between landlord and tenant. The renewing of the lease some years before the old one expires, in cases where there is no objection to treat with the present tenant, is an excellent way of keeping the lands in an improving state; for in spite of the most correct articles, few or no tenants who keep their lands in high order, will study to leave them, at the end of the lease, in the same order that they are to be found in some years previous to the expiration, unless he have assurance that no advantage will be taken, of raising his rent immoderately, on account of any extraordinary improvement that he has made; the proprietor satisfying himself with the natural rise of the lands, and with the improvements stipulated by the lease, which he is fully entitled to in its

its utmost extent. The worse the land is, the greater is the danger of its being hurt by the tenant, on account of the practice of hanging out the farm in the market, till within a few months of the expiration of the lease. It has been remarked, that farms of 200 or 300l. yearly rent, have been left 100l. a year worse, or of less value, than they were three or four years previous to the tenant's removal. This is not so evident to the proprietors in a rising market, as it has been in a stationary one; and if these worn out farms are let to a poor tenant (there being still many such in the county), they soon come again to the market: if they are let to a good and able tenant, he will soon restore them to their former value; but he naturally knows his own consequence, and takes the lands as moderately rented as he can.

By renewing the leases some years previous to the expiration of the current ones, the tenant has an opportunity of enriching the lands, and putting them in a condition to pay the advanced rent, thereby giving additional security to the landlord against accidents, or a succession of bad crops. He has also time to enter on permanent improvements, by draining, &c. and to try to break through the moor-band under the moor lands, and incorporate a greater quantity of soil with manure, thereby giving this class of soil a different appearance, and does not grudge laying out considerable sums on repairing the farm steadings, and building necessary additions.

It must sometimes happen, that both the proprietor and the tenant may have an objection to deal with one another for a renewal of the lease. Where this is the case, it would be for the proprietor's interest, in most cases, to agree to give the present occupier all the rise rent that could be had, especially in a rising market, during the years of the then current lease, on his giving up the same.

These terms have been offered in the county, sometimes by the one, and sometimes by the other party, and have sometimes

times been refused by both. Such terms ought never to be refused by the proprietor, because it is his own fault if he do not secure the payment of the new, or rise rent, effectually, by accepting of a good tenant; for at the time of a tenant's entering to a farm on a rise of rent, there is seldom any doubt as to the payment of the rent, no matter how much it is advanced, provided the tenant is well chosen.

Notwithstanding the general spirit for improvement in the county, there are still tenants living very poorly, on farms where other men, more active, and having command of money, would make money, over and above living well. The proprietors having made this remark, may have been led in many instances, to let extensive farms, to such individuals as come under the latter description.

IMPROVEMENTS SUGGESTED.

THE improvement of Lammermoor, is an object of high consideration: the moor and hilly lands can never be rendered fertile for tillage and cropping, but much may be done in turning them from heather to green pasture, and thereby banishing those restless and wild animals, the black faced sheep, the natural and known enemies to all kinds of fences, hedges, planting, &c. They are now pretty well hemmed up to the hill tops, the white faced kind having within these thirty years advanced far up the water sides and edges upon them.

Improvements in this district on the moor lands, must go on very slowly, without aid from the proprietors: a tenant may improve a few acres yearly, by fallowing and liming at the commencement of his lease, but before it be half run, he gives up the operation, and crops severely what he has improved. Were the proprietor to inclose the lands, and give the full value of the lime laid on moor lands, after being two or three years in fallow, and laid to grass with the second crop after liming, on being allowed five per cent. by the tenant for the outlay, perhaps in ten, twenty, or thirty years hence, a very great part of it would be green pasture, in place of heather. We do not mean however to say, that the whole of the hills in Lammermoor, can be improved by inclosing: on one or two high farms, the fences made many years ago, serve no other purpose but to answer as paths for the sheep in time of snow. We have already suggested one improvement under the title "Waste Lands," namely, of sowing broom and whin-seed. If these could be raised to the very summits of the hills, the improvement would be great.

The improvement of the quality of the grain, by being attentive to the choice of the best seeds, and by good dressing,

or

or cleaning, is an object of importance to the farmers in the lower districts; and it is supposed that nothing could contribute so much to this, as the selling of grain by weight all over the county. The merchants would not oppose this; the laws of the country do not forbid it, and therefore nothing is wanting but a general association among the gentlemen, farmers, and merchants, to bring it about, and to settle and fix the weight of a boll, a firlot, a peck, &c. of each of the kinds of grain cultivated in the county. The trouble of weighing might be rendered less than that of measuring, by having a small weighing machine, that could be easily moved from place to place, and contained in little room. The empty sack or bag being set on this machine, has only to be filled till the index rise to the mark for the quantity wanted. It is supposed that the machine could be made for little more money than would purchase a set of measures.

ON STEADY MARKETS.

It would tend to raise the rents in the county, or at least make them more equal, could the markets be so regulated, as to keep the prices of grain and stock nearly equal, or more steady: the prices rise and fall in different years, from unforeseen causes, in such a degree as to make the farmer always fear the worst. He naturally wishes to rent the lands at such a rate, as may enable him to bear two or three years of very reduced prices. The proprietors, on the other hand, naturally expect a rent equal to the prices that have been for some time current: on these accounts, there is sometimes a difficulty in making a bargain for a new lease. Were the prices nearly steady, they would be more ready to agree at once. Under the direction of the Honourable Board of Agriculture, laws may be made, that may have a tendency to steady the markets for grain, but it seems impossible to keep the

market

market for stock equal. Hence it will continue to be said, that such and such years were the time to make good or bad bargains, as to land.

HARROWING OF WET LAND.

It is in some seasons distressing to the farmers in this county, that they cannot get their wheat sown, the land being so wet as not to carry the horses for the purpose of harrowing. Some years ago the writer thought of a method, which answered well, and prevented the land from being poached by the horses' feet. He took an axle exactly equal in length to the breadth of the ridge to be harrowed, and fitted a common cart wheel on each end of it: to the axle were chained as many common harrows as covered the breadth of the ridge, which were four in number; four horses were yoked to the outer ends of this axle, two a-head on each side of the ridge; these walked along in the furrows of the ridges; the wheels turned easily round, and followed the horses, keeping also in the furrows. When the harrows reached the end of the ridge, they could not be turned about readily to come over the same ridge again at that time, but they easily passed on to another ridge, and thus they went along one ridge, and returned by another, as often as was found necessary for harrowing the field sufficiently.

The common harrows are drawn by one horse, and two, sometimes three horses go a-breast, and are led along by a stout man, commonly the ploughman or carter, who walks at their head, sometimes the length of the bridle reins before them. Where three or four of these teams go together, which is not uncommon, it is often observed, that the whole are stopped till any one of the drivers put up his horses' bridle, and deliberately goes behind the harrows to disengage a clod or stone that may happen to be entangled among the harrow-

teeth, whereas this could be done much more readily without stopping the horses, were the driver to walk behind the harrows, and manage the horses with reins, as he does in the plough. It is many years since this practice was introduced, and yet such is the dislike to any thing new, that it has not become general.

The smiths and carpenters, as before observed, are expensive to the farmer, not only on account of the price of their work, but likewise on account of the servants spending, and being inclined to spend many of their working hours in their shops, which may be considered as the coffee-houses in the county. If the master is out of the way of attendance, it often happens that a plough is unyoked, on account of a mere trifling article being discovered to be in disrepair, and the ploughman mounted to go to the smith's or wright's shop.

It might be a matter of conveniency and saving to the farmer, were the ploughmen, encouraged by premiums, to attend the wright's and smith's shops at bye-hours, for a year or two, with a view to learn themselves to sharpen the plough-irons, shoe a horse, make a horse-tree, or mend any small article, not worth sending to the wright's or smith's shops, which are sometimes at a distance from the farm.

The coal, for almost the whole of the lower district of the county, is brought from Northumberland, where in general it is to be had in plenty. It is cut, and rises in large pieces of different sizes, some of them a foot or two square, and notwithstanding the bulk of the pieces, it is sold by the measure, which is large or scanty in proportion to the demand. From this vague measure, it never can be discovered whether or not the servants bring home to their masters what they receive at the coal-hills. It is often alledged, that many of them do not, as they can very readily purchase a bottle of beer on the road with a bit of coal. To detect this practice, if any such exist, and to satisfy the master that he gets what he pays for, the coal ought to be sold by weight, as is the practice

all

all over Scotland. Small coal may be measured, but it is very ridiculous to see a small measure brought to measure large pieces of coal. Now that coal is imported at Eymouth, the gentlemen and farmers, were they to unite, would soon bring the coal masters to agree to a measure, fraught with so much justice and equity, as that of delivering the coal by weight in place of measure.

Several of the gentlemen of the county have, at different times, expended considerable sums in boring and sinking, with a view to discover coal in this county, but have not, as yet been successful. It is much feared there is none in it (but what is already discovered, which is not thought worth the working), otherwise the crop would have been found breaking out on some of the ditches which have been cut, in all directions, over the county, or in some of the banks of the waters or rivulets, as it has been in all other coal countries.

The strata of metals in this county do not lie level, but have a considerable rise, though sometimes in different directions. On this account, supposing there is coal in the county, there is no necessity to go to a great depth to discover it in the first instance: it may be 100 or 200 fathoms deep on one estate, and yet the same seam will be found at six fathoms deep on another estate. To make a thorough search, and put the matter, as to there being coal in the county, beyond all doubt, a general subscription should be raised, to a considerable amount: coal engineers of character and ability should be employed, to make a thorough search all over the county: the subscribers ought to be paid back their subscriptions, if a workable coal is discovered, out of the first free produce of it. A trial for coal on a plan like this, would satisfy gentlemen's minds, and prevent money from being thrown away on the search at any period hereafter.

The statute service funds in the county being levied by a rate on each horse, &c. the assessment mentioned in the preceding

ceding part of this Report, is very much evaded by a certain class of the tenants, which lays the heavier burden on those who pay full. The taking up of the list yearly by overseers, is the cause of much discontent; and very often, the payment of the sum charged is suspended, on account of an alledged over-charge.

To remedy this, and to ascertain the exact sum to be levied, it has been proposed, to lay on the rate by the valued rent, or by the real rent, or by the plough-gate, rating a plough-gate at 100l. of valued rent. In order to shew how far the levying of the fund in this last way, would alter the parochial payments made by a rate on the horses, the following table was drawn up in the year 1780, from the only full lists then to be had.

STATE

STATE of the CONVERSIONS of the STATUTE LABOUR into COMMUTATION MONEY, for the Year 1821.

STATE of the CONVERSIONS of the STATUTE LABOUR in the COUNTY of E

raised by levying the Statute Services at Twenty Shillings

Districts.	Parishes.		FOR THE YEAR 1774. Labourers 3s.	Horses 5s.	Mares & Foals 2s. 6d.	Cotters & Herds 1s. 6d.	Inhabitants of towns 3s.--1s. 6d.	Conversions Sterling. £. s. d.	Sums Total of Conversions, Sterling. £. s. d.	FOR THE YEA Labourers 3s.	Horses 5s.	Mares & Foals 2s. 6d.	Cotters & Herds 1s. 6d.	177 towns 3s.--1s. 6d.	
Coldingham.	Ayton		90	181	16	81		66 16 6		89	185	17	73		4
	Cockburnspath	4	101	178	1	45		63 3 0		96	167	4	48		
	Coldinghame		176	420	11	83		139 0 0		179	399	20	83		
	Eymouth		30	77	4		115	35 7 0		29	69	2	75		31
			397	856	32	209	115		304 6 6	393	820	43	279		35
Dunse.	Abbay St. Bathens		14	29		9		10 0 6		14	28	1	13		
	Buncle & Preston		63	124	8	27		43 9 6		62	121	10	31		
	Cranshaws		9	20	3	15		7 17 0		10	20	1	10		
	Dunse		93	199	7	44		100 15 6		93	199	7	44		290
	Edrom	8	149	268	10	43		93 16 6							
	Langton		52	76	2	27	8	29 16 6		32	72	4	26		15
	Longformacus		31	56		33		21 2 6		31	59		33		
	Pendules		11	21	1	7		7 11 0		10	20		10		
									314 9 0						
Foulden.	Churnside		68	128	14	50		47 15 6		61	128	15	50		
	Foulden	4	31	69	10	34		25 12 6		34	68	9	34		
	Hutton		70	126	18	73		49 14 6		72	143	5	76		
	Mordington		27	52	5	20		19 3 6		27	52	5	17		
			196	375	47	177			142 6 0	194	391	34	177		
Gordon.	Earlstoun		68	152	6	64		53 15 0		64	134	3	61		
	Gordon	4	55	103	12	35		38 2 6		57	104	11	32		
	Martin		62	107		15		36 10 0		49	104		21		
	Nenthorn		22	55		4		17 7 0		26	52	1	2		
			207	417	18	118			145 14 6	196	394	15	116		
Greenlaw.	Greenlaw		51	161	12		83	54 18 0							
	Hume	3	44	77	11	35		29 3 6							
	Polwarth		15	38	5	18		14 11 6							
			107	276	28	53	83		98 13 0						
Lauder.	Channelkirk		35	67	4	24		24 8 0		34	56	6	23		
	Lauder	4	112	157	2	174		62 15 0		91	150	1	62		33
	Legertwood		35	56	10	17		22 0 0		34	52	5	12		
	Wolfstruther			70	5			31 4 0		48	71	5	54		
									140 7 0	207	329	17	151		33
Swinton.	Coldstream		197	254	17	116		103 17 6		238	253	18	101		
	Eccles		197	315	18	72		115 19 0		183	302	11	83		
	Fogo		60	96	20	16		36 14 0		65	97	20	18		
	Ladykirk	6	53	93	4	32		34 2 0		45	80	8	32		
	Swinton & Simprin		77	148	5	56		53 7 6		79	132	11	71		
	Whitsom & Hilton		65	126	14	34		45 11 0		68	124	15	31		
			649	1032	78	326			389 11 0	678	988	83	336		
									1535 7 0						

of BERWICK, for the Years 1774 and 1775, compared with the Rate proposed to be every Hundred Pound Scots valued Rent.—[To face p. 84.]

13

towns 3s.—1s. 6d.	1775. Conversions Sterling. £. s. d.	Sums Total of Conversions, Sterling. £. s. d.	Medium. £. s. d.	Valuation of each Parish. £. s. d. fr.	Amount at the rate of 20s. for 1col. £. s. d. fr.	Rise above the Medium. £. s. d. fr.	Lower than the Medium. £. s. d. fr.
4	67 16 0		67 6 3	6620 1 0½	66 4 0·0½		1 2 2·0½
	60 5 0		61 14 0	6561 3 11½	65 12 2·3½	3 18 2·3½	
	135 6 6		137 3 3	13037 10 0	130 7 6		6 15 9
31	32 2 6		33 14 9	1665 7 3½	16 13 0·3½		17 1 8
35		295 10 0					
	10 4 0		10 2 3	1113 10 10	11 2 8·2	1 0 5·2	
	43 2 6		43 6 0	6232 11 0½	62 6 6·0½	19 6 0·0½	
	7 7 6		7 12 3	1271 7 1	12 14 3·1	5 2 0·1	
90	97 8 0		99 1 9	11069 0 2½	110 13 9·2½	11 12 0·2½	
	87 18 6		90 17 6	10128 7 8½	101 5 8·0½	10 8 2·0½	
15	27 10 0		28 13 3	3092 14 2	30 18 6·2	2 5 3·2	
	21 17 6		21 10 0	3604 13 9	36 0 11·1	14 10 11·1	
	7 5 0		7 8 0	838 10 10	8 7 8·1	0 19 8·1	
		302 13 0					
	46 15 6		47 5 6	4307 5 10	43 1 5·2		4 4 0·2
	25 15 6		25 14 0	2595 16 8	25 19 2	0 5 2	
	52 17 6		51 6 0	6380 14 7	63 16 1·3	12 10 1·3	
	18 19 0		19 1 3	2045 16 8	20 9 2	1 7 11	
		144 7 6					
	48 1 0		50 18 0	5948 13 11½	59 9 8·3½	8 11 8·3½	
	38 6 0		38 4 6	4398 8 9	43 19 8·1	5 15 2·1	
	34 18 6		35 14 3	5675 5 7$\frac{17}{24}$	56 15 0·0$\frac{16}{24}$	21 0 9	
	17 3 6		17 5 3	2380 19 9½	23 16 2·1	6 10 11·1½	
		138 9 0					
	51 13 6		53 5 9	6836 3 11½	68 7 2·3½	15 1 5·3½	
	27 17 0		28 10 3	3961 9 2	39 12 3·2	11 2 0·2	
	11 7 6		12 19 6	1624 9 7	16 4 10·3	3 5 4·3	
		90 18 0					
	21 10 0		22 19 0	4729 13 9	47 5 11·1	24 6 11·1	
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	19 13 0		20 16 6	4023 3 6½	40 4 7·2½	19 8 1·2¼	
	36 6 6		33 15 3	4524 9 7	45 4 10·3	11 9 7·3	
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	108 15 6		106 6 6	8743 4 7	87 8 7·3		18 17 10·1
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	37 17 0		37 5 6	4041 2 11	40 8 2·3	3 2 8	
	30 3 0		32 2 6	4393 15 0	43 18 9	11 16 3	
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		1494 13 0					

HARBOUR OF EYMOUTH.

We come now to the last, though not the least important part of the improvement of the county, the harbour of Eymouth, the only port for shipping in the county. It is going fast into decay, and it is feared cannot be repaired without aid from government, the gentlemen of that quarter of the county where it is situated, having already subscribed large sums for erecting the north pier, and the Pease bridge, two great works. The importance of this harbour to the county, and to the nation, cannot be better described than it is in Mr. Smeaton's report, and the memorial that followed thereupon; the tenor whereof follows:

THE REPORT OF JOHN SMEATON, ENGINEER, UPON THE HARBOUR OF EYMOUTH.

The harbour of Eymouth lies at the corner of a bay, in which ships can work in and out at all times of tide, or lie at an anchor secure from all winds, except the northerly and north-easterly. From this circumstance its situation seems very advantageous; but as the mouth of the river, or harbour, lies open to the northerly winds, ships cannot lie in safety therein, without going up beyond the elbow of the present quay, where the water being shallower by several feet, and the breadth much contracted, the harbour is not only defective in point of capacity, but in safety also; for at a full sea (the mouth being wide), the sea tumbles in with so much impetuosity, that great seas find their way round the elbow, and make the vessels, even there, lie not so quiet as to be wished.

In order, therefore, not only to enlarge the harbour, but very greatly to increase the safety of vessels lying therein, it is proposed to build a north pier, to defend the harbour's mouth;

mouth; and to this end, nature has furnished a ledge of rocks, not only capable of making the most excellent of all foundations for such a pier, but in as advantageous a direction as could be wished; upon which a pier is proposed to be built, according to the plans accompanying this report; for, according to the direction therein specified, the harbour will be defended from all such seas as annoy the bay, and the only points from whence the harbour could be affected by seas coming in through the mouth, is land locked by the points of the bay; so that the harbour will, in its whole extent, be perfectly safe in all winds. It is also to be noted, that the same circumstances which concur to make the harbour safe in all winds, afford the means of vessels getting in and out in all winds*; and this proceeds from the entry into the harbour lying nearly at a right angle with the direction into and out of the bay.

It is also a great advantage, that there is a good flow of tide, which at spring tides is said to be twenty feet; and

* 1. If the wind is right a-head, to vessels coming into the bay, it will of course be smooth water, and there being room enough to turn, they can work in till they are near the bottom, and then sail with a fair wind right into the harbour.

2. If a vessel comes into the bay before the wind, with a great sea, she will also have the wind fair to sail into the harbour.

3. If the wind is right a-head to her going into the harbour, she will have a fair wind into the bay, with smooth water, so that after coming to an anchor she can warp herself in.

4. In like manner a vessel that wants to go out:—if the wind blows right into the bay, she will have a fair wind out of the harbour, and having room in the bay, can work herself out to sea, unless it blows so hard as to bring on a great sea, and if so, it would be undesireable to be out at sea upon a lee-shore.

5. If the wind is right a-head to a vessel desiring to go out of the harbour, as the bay will be smooth, she can warp out; and being out, has a fair wind out of the bay.

6. A vessel going before the wind out of, or into the harbour, will have a fair wind out of, or into the bay respectively; and a vessel going before the wind out of, or into the bay, will have a fair wind out of, or into the harbour respectively.

there

there is at the lowest ebb, several feet of water at low water, between the proposed pier heads, so that there will be seldom less at neep tides than sixteen or seventeen feet of water into the harbour, which is capable of receiving vessels from three to four hundred tons, according as they are more flat or more sharp built, and which afterwards can, upon a greater flow of tide, be got into a more advantageous birth.

Another advantage to the executing the proposed design, arises from a great quantity of rough rocks that lie at the north-westerly point of the bay, very proper for building the outsides of the body of the pier, the inside of which may be done with rough stones, won or blasted from the rocks neighbouring to that upon which the pier is proposed to be built. By this means the pier may be executed at a trifle of expence, in proportion to the extent and utility of the design; for the rocks that are represented within the intended pier, will be removed and made smooth, so as to procure an addition of harbour room at little or no charge, as they will be used within the pier. When this is done, there will be an addition of harbour room in the space between the elbow before mentioned and the pier heads, capable of holding thirty ships of middling size, with sufficient passage; which in time of war will be very useful on this coast, not only for the refuge of coasters from the enemy, but in bad weather for privateers, and the small sized vessels acting offensively.

MEMORIAL CONCERNING THE HARBOUR OF EYMOUTH.

The gentlemen of the county of Berwick, sensible of the natural advantages and general utility of the harbour of Eymouth, have done all in their power towards rendering it as safe and commodious as possible.

Near twenty years ago, they raised among themselves, by subscription, without any public aid, a sum exceeding 1500l. in

in order to build a pier on each side of the little river that runs into the bay of Eymouth, according to a plan given in by a very able engineer. The intention of one of these piers was to serve as a wharf wall, as also to deepen the harbour, by preventing the return of the gravel which is forced out by floods in the river. The other was intended for a bulwark against the heavy seas which break in from the north-east, the only side on which the harbour is exposed.

The sum at that time subscribed, was entirely exhausted in building the first pier, or wharf wall. That building, however, has had all the good effects that were expected from it: the depth of water is greatly increased, and the bar at the mouth of the river totally removed: and as the harbour has by means of it been enlarged, and made more commodious, the trade of the place, and the resort of shipping, have become every day more considerable.

Encouraged by the success of what they have already done, and not doubting that they will meet with aid from the public, in a work of such general importance, the gentlemen of the county of Berwick have resolved to attempt, by a new subscription, to raise such a sum as will enable them to build the other pier, or bulwark, and thereby complete the harbour. With this view they employed Mr. SMEATON to survey the harbour, and give them a plan and estimate. They thought, with his advice they would proceed on the surest grounds, and that his known abilities, and superior knowledge in these matters, would give weight to their application to the public. The fullness and accuracy of his report, makes any more particular description of the harbour itself unnecessary.

It is also unnecessary to mention the advantages that will flow from this work, to the county in which it is situated. The very large sums that have been subscribed, both now and formerly, by almost all the inhabitants, shew their conviction of the good effects it will have. The intention of this

this memorial, is chiefly to point out some of the advantages which the public in general will receive from it, and which give room to hope for aid, not only from government itself, but from the royal burghs of Scotland, from the different offices of insurance, and from all those who are in any way concerned in the trade on the east coast of Britain.

The coast between the Humber and the Firth of Forth, is known to be one of the most rugged and dangerous in Europe; and in all that space there is not one harbour, except Eymouth, accessible in stormy weather.

When ships are employed on that coast, between Holy Island Scares and the Firth of Forth, if the wind blows high from the north-east, it becomes almost impossible for them to clear the promontories, and they have no chance of safety, but by running into Eymouth, by which means, even in the present situation of the harbour, the crew will be safe; but for want of the proposed bulwark, or break-water, the ship, and cargo, particularly if what is on board is perishable, are still in the greatest danger.

When ships bound either southward or northward, are stopt by contrary winds, they may put into Eymouth without danger of detention, for they can work in or out with any wind; and as there is a greater depth of water there, than in any other harbour between the Thames and the Forth, equally accessible, they cannot be neeped: whereas, without this harbour, or until it is made safe, ships going the one way, are, in contrary winds, forced to put back to the Firth of Forth, and those going northward, must sail back to some of the ports on the coast of England, where they are in danger of being detained, both by want of water and by not being able to get out but in particular winds; and in either case, their voyage back is along a rugged, and dangerous coast.

It is very properly observed in Mr. SMEATON's report, that the harbour of Eymouth will be very useful on this coast,

for the refuge of coasters from the enemy. It will also be a proper station for privateers, and the small sized vessels acting offensively, as well as for the custom-house and excise yachts. Hitherto, all the King's ships, of every kind, acting on this coast, have been stationed at Leith, which is twenty miles from the mouth of the Forth; and it is well known, that the enemy's privateers, as well as smuggling vessels, have often been in those seas, when the King's ships and yachts are either confined by contrary winds in the Firth of Forth, or, by being at such a distance, the mischief has been done before they could come to prevent it; for the same wind which brings the enemy's privateers and smuggling vessels to this coast, confines the King's ships within the Forth: whereas no enemy's ship, or smuggling vessel, can appear between Holy Island Scares and the Red Head, without being discovered from Eymouth; and as they can work out of that harbour in every wind, it is certain, that if the King's ships and yachts were stationed there, the enemy's privateers durst not appear, to annoy the trade, and smuggling in those parts would be totally suppressed.

APPENDIX.

APPENDIX.

GENERAL VIEW

OF THE

AGRICULTURE

OF THE

COUNTY OF BERWICK,

WITH

OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT.

BY ARTHUR BRUCE,

SECRETARY TO THE NATURAL HISTORY SOCIETY OF EDINBURGH.

DRAWN UP FOR THE CONSIDERATION OF

THE BOARD OF AGRICULTURE AND INTERNAL IMPROVEMENT.

BY PATRICK BRUCE

OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT

[illegible]

COQUILA OLEBRIGK

[illegible]

VOCABULARY

VOLUME IX

TO

SIR JOHN SINCLAIR, BART.

PRESIDENT OF THE BOARD OF AGRICULTURE.

SIR,

IT is with some diffidence I here lay before you, the following observations on the Agriculture and Improvement of Berwickshire. If it shall prove conducive, in any degree, to promote the purposes of that valuable institution, which you have been so instrumental in establishing, it will afford me the utmost satisfaction. If the pains here bestowed, in digesting and collecting these materials, have been attended with any success, it is more owing to the fertility of the soil, than the hand of the cultivator.

I am,

With the highest respect,

SIR,

Your most humble servant,

ARTHUR BRUCE.

APPENDIX.

INTRODUCTION.

THE county of Berwick, or Merse, as it is sometimes called, though not one of the largest, is, in point of fertility, one of the richest counties in Scotland. Its form is quadrangular; the sides waving and unequal. Its eastern boundary is the German Ocean, from Dunglass-bridge to within about two miles of Berwick; a space of about sixteen miles. On the west, it is bounded by a wing of Mid-Lothian, and part of Roxburgh-shire, for about eighteen miles. On the south, the Tweed separates it from Northumberland for fifteen miles, and Roxburgh-shire for about twelves miles. The northern boundary, with the county of East-Lothian, runs along the ridge of Lammermoor hills, from Soutra hill, perhaps the highest elevation of this mountainous ridge: passing Fassny water, Cranshaws; and so on to Dunglass-bridge, upwards of thirty miles.

Content.—The mean length, from east to west, is 30 miles; and its breadth 17 miles; which, taken altogether, may amount nearly to 510 square miles, or 326,400 acres. But the county naturally divides itself into two separate divisions, or districts:

1st, The northern, or Lammermoor district.
2d, The southern, or what is properly called the Merse.

This last may be reckoned to extend, by a line drawn from the sea, passing Coldinghame to the west, by Preston, Dunse, Polwarth, and to Home Castle, being 18 miles and an half in length; and, in breadth, at a medium, to the Tweed, 8 miles.

The Merse district then contains 148 square miles; and the whole will stand thus:

	Square miles.		Acres.
Lammermoor contains -	362	=	231,680
Merse - - -	148	=	94,720
	510	=	326,400

The miles and acres here stated, are English measure, that being the common measure in this county.

SECTION

SECTION I.

OF THE LAMMERMOOR DISTRICT OF THE COUNTY

Air and Soil.—In this high elevation, the air is dry, but keen. The people are healthy; and, except rheumatisms in few instances, they are free from diseases.

The soil, over all the higher parts of this district, consists of a light peat mould, evidently formed, through length of time, from the decayed parts of animal and vegetable substances, with a small mixture of siliceous and argillaceous earths; or, in plain English, sand and clay.

In other parts of the district, lower down, as in the parish of Westruther, there are much moss and swampy grounds, which, in the winter season, lye under water, and are of little value, unless meliorated by draining, planting, and other improvements that might be made there.

By the sides of the Whitater, in the haughs and banks surrounding it, also upon the Leeder, there are extensive haughs of the richest quality, and highly cultivated with the different kinds of oats, barley, and sown-grass. Turnips also are here cultivated to a great extent; and in no country succeed better. In some grounds upon the Leeder, wheat is also cultivated with much success. But as these soils have, for many years (indeed time immemorial), been subjected to the plough, their former and present state are not so strikingly different, as those of some farms situated in the higher parts of the country. There the effects of lime and other manures appear in their greatest perfection, upon those soils which had not formerly been ploughed.

Mountains.—The ridge of Lammermoor hills is of high elevation, and beside forming, for many miles, the northern boundary of the county, it also interrupts the view of the Cheviot from the Ochil hills, or any other of the southern mountains. Of this ridge, Soutra hill is supposed to be the highest; but, hitherto, no actual mensuration, so far as I know, has been taken of it. But, in judging by the view, from its elevated top, of the neighbouring hills and country, it must be upwards of 1500 feet high.

Mainslaughter [Manslaughter] Law, in the parish of Longformachus: its height above the sea, has, by actual mensuration, been ascertained 1260 feet. Cockburn Law also, is known to be 900 feet above the sea level. And the two Divvington Laws, in the parish of Longformachus, are nearly of the same height.

Rivers.—The three principal rivers in the county, that have their source in the Lammermoor district, are the Leeder, Whitater, and Blackater.

The Leeder has its ource in the Soutra hills, a little to the west of Channel-kirk, which takes a winding course through the fertile vale of Lauderdale; and, after running upwards of twenty miles, it falls into the Tweed, about two miles above Dryburgh abbey.

The Whitater rises also in these hills, on the north west corner of the county, in the parish of Whittinghame; and in its course, crosses, in an irregular diagonal line, from N. W. to S. E. the whole county; and, after a course of between 30 and 40 miles, it falls into the Tweed about three miles above Berwick.

The Blackater rises to the west of Greenlaw, in the parish of Westruther; and after a very irregular course of about twenty miles, it joins the Whitater at Allanbank.

Attempts

Attempts to improve the Lammermoor District.—Though upon the water sides, and haughs, there have always been some cultivation, it is not till very lately that attempts have been made to carry that into the interior parts, where the moors and hills were almost wholly covered with heath, and grazed by the small black faced breed of sheep.—Notwithstanding the distance of manure, badness of roads, &c. there have, within the course of the last twenty years, been very considerable improvements made in different parts of the district. Upon its two extremities are the farms of Carfrae and Lumsden.—The first lies upon the N. W. corner of the county, and has been possessed about 20 years by Mr. ROBERT HOGARTH, from the Merse; and in that short period, he has made an astonishing change upon a large tract of very high wild country. Extensive fields of turnips; the richest crops of oats and barley; and crops of hay and good pasture, are no where to be seen of better quality—all these, where formerly little else but heath grew. The advance made upon his live stock, is, of course, in proportion to the melioration of the soil; especially upon the breed of sheep. The influence also of so good a pattern, has produced very happy effects upon many of the neighbouring farms, both in crop and stock. It might not be improper to suggest here, that in a hilly country like this, where the harvests are commonly late, grain is in danger of being injured by frost; and, in stormy weather, lost by winds and rain. These risks, the distance from manure, and expence of tillage upon a hilly farm, seem all to point out grazing as the proper object of the cultivator.

Farther:—The farm of Lumsden, on the east, where many improvements also have lately been made. This lies in the parish of Coldinghame. Though a high bleak exposure, along the elevated sea rocks which bound the German Ocean, is now much improved by the skill and ardour of Mr. ROBERT ANDERSON, the present possessor, during the course of the last twenty years; whose exertions, indeed, have been made chiefly with a view to meliorate his sheep stock, which he has done most completely, by introducing the best rams from Northumberland; and by having a constant command of turnips and hay for winter and spring feeding, he is enabled to turn his stock to the greatest possible advantage.

Thus, I have presented to your view, a short sketch of the Lammermoor part of the county of Berwick, in its two extremes; both in its *former*, and in its *present* state of cultivation. These great changes have been made by the skill and industry of mere farmers, who pay rent, and not by proprietors themselves. This, so far as it goes, clearly shews that the skill and industry of the persevering husbandman does not pass unrewarded here, any more than in the more genial clime on the banks of the Tweed.

That what is above said of the success of Lammermoor farming, may have its full effect, permit me to give you, from good authority, a particular statement, upon an average of three years.

Statement with respect to the Management and Produce of a Lammermoor Farm.—I shall only give one other instance, as I find it particularly stated in a letter from the possessor* to Mr. WIGHT.

On the arable land, after liming, he sows oats; and either sows it off with the second crop, or fallow the third year. On fallow, he sows turnips, which are eat by sheep in the proper season. Barley (big, I suppose), he seldom sows more than six

* Mr. ALEXANDER LOWE, in Woodend, Langton. Wight's State Husb. Scot. vol. ii. p. 304.

acres out of one hundred. The oat crop, when got safe down, yields five bolls per acre. One fourth of the land in tillage, is laid down in grass annually, and pays well. Upon moor land, he observes, that when the grass is young, it will maintain more than when older. Folds his sheep all the summer, upon lay that has never been limed. The folds occupied preceding Lammas, he ploughs up; and after one furrow only, he sows turnips the same season, and always has them good.

The kind of sheep are the very best of the Lammermoor breed, without mixture. He keeps only a breeding stock. Trials made for selling lambs fat, he finds not so profitable as feeding through the winter, and selling his supernumeraries for hogs in the spring; but is now trying to amend his breed, by some of Mr. BAKEWELL's rams. Smears, at the rate of a firkin of butter to six pints of tar. This extra-quantity of butter has greatly meliorated his wool in quality, from eight shillings to twelve shillings and sixpence per stone.

The farm consists of four hundred and thirty acres, viz.

In Moor	- - -	30 Acres.
Meadow and braes	- -	100 ——
100 acres old outfield 200 acres limed	-	300 ——
		430 Acres.

By an average of profits and expences, kept for these three years past, the state will stand as follows:

Live-stock, are twelve score ewes, and four score hogs, which get the tup when they are gimmers.

PROFIT.	Sterling.	EXPENCES.	Sterling.
Eight score lambs, at 5s. — —	L. 40 0	Smearing sheep — — —	L. 5 0
Four score ewes, at 12s. 6d. —	50 0	Harvest work — — —	10 0
Three packs wool, at 8l. — —	24 0	Smith and Carpenter's accompts —	5 0
Summer graze, ten head of cattle —	5 0	Working hay, turnips, folds —	5 0
Winter ten oxen, long horned —	5 0	Rent — — — —	135 0
Sell one hundred and fifty bolls corn —	67 10	Balance: Profit of one year —	31 10
	L. 191 10		L. 191 10

Some Improvements carried on upon the Farms along the Sea Coast, with Sea-ware.— Upon the north-east verge of the county, there is a tract of land lying along the sea-coast, which, upon account of some peculiarities of management, merits our particular attention. The farms here alluded to, are the property of Sir JAMES HALL, of Dunglass, Bart. and lie in the parish of Cockburnspath. The lower part of these grounds, along the shore, are inclosed, and in a high state of cultivation. The manure used is of the richest kind, viz. fucus vesiculosus [sea-wrack], commonly called sea-ware in Scotland.

The use of this valuable sea-production, as a manure, has been long known in Scotland; and where the coast is accessible, it is grasped at by the husbandman with avidity. It grows along this coast upon the rocks, half-a-mile out to sea, in the greatest abundance; and, in stormy weather from the east, by the agitation of the sea, much is tore up, and driven upon the coast, which they ply night and day, until they have got

got what quantity they have occasion for. They generally spread it on the land in its recent state; but sometimes, to answer particular purposes, it is laid in heaps on the field upon which it is afterwards designed to be spread as a manure. That it may not shrivel and dry, it is immediately ploughed in; for if it is permitted to evaporate to dryness, no plough can cover it; and harrowing in the seed, completely undoes the whole business.

Sea-ware is greatly used in barley-seed time, both as it gives an additional value of one shilling or more, per boll, for seed; being earlier grain by ten days, than that from any other manure; and is likewise in great request by brewers, as no other barley malts so well. But at this season, sea-ware they reckon of double value to any other time of the year. At any season, a cart-load of sea-ware is equal in value, as a manure, to the same quantity of dung; but in barley-seed time [May], they put it at double value, both as it increases the quantity and quality of the grain produced, occasioned, as they suppose, by the plant at this season possessing the powers of fertilization in a higher degree. This may very probably be the case, as the plant is at that season very fast approaching to a state of fructification*, which itself also completes in July and August. Ware is also sometimes spread upon the ground after the seeds are sown, or even when springing up, if the land is dry; also upon grass land, as a top-dressing; but neither of these practices are so interesting to the farmer as the former seems to be.

This manure is also obtained, though in small quantities, upon other parts of the sea coast of this county; but, in general being a high rocky shore, precludes all possibility of obtaining this valuable manure in abundance.

Manures.—Lime is the only extensive and general manure used in Lammermoor; and though the distance is in many places from eight to sixteen or seventeen miles, the late improvements upon the roads, and the great success produced by lime as a manure, have removed every difficulty; and now the farmers here plainly see, they must either surmount these, or sit down and pine in a state of poverty. But they are so completely convinced of the amazing fertility produced by lime, that one gentleman farmer informed me, that after a carriage of fifteen miles, he had, with the produce of the first crop, oats after fallow, defrayed his whole expence.

The quantity of lime necessary upon dry sound moor land, has been much reduced of late, and the effect greater, by applying it upon well prepared summer fallow; not by any means suffering the lime to be previously saturated with water, as is too often done, but spread on the field quite hot in its pulverised state. Thus the lime will have its full effect, and ten cart loads, or forty bolls, shell lime, will do an acre of such land well. But upon sour swamps, or where water has stagnated in winter, if such can be well drained, it would be a much safer improvement to give it a top-dressing with lime or other manure, upon the sward, and retain it as an improved pasture, than, in that situation, to risque tillage, or even the probability of lime having any effect. The application of dung-hills, and the different kinds of marl, will, more naturally, fall to be treated of in the Merse district.

Size of Farms.—In Lammermoor they are all large, and must of necessity be so. As stock ought to be the leading object, the farmer should have not only great extent, but

* At this season of the year, the vesiculæ, or small bladders growing upon this plant, are filled with a dense gelatinous matter, which, probably, is the cause of its present fertility.

in his possession variety of hill and dale for grazing, and of lands capable of improvement by the plough, where these can be had. Perhaps a farm of this kind ought not to contain less than five or six hundred acres. Leases, or covenants, in this district, are for nineteen or twenty-one years. The time of entry, at Whitsunday; and as these lands are almost wholly in pasture, the rents are payable at Martinmas and Whitsunday; though, generally, not demanded till the Candlemas and Lammas terms following. At entry, the houses and fences are inspected, (sighted, as the term is), either by birley-men*, or by persons mutually chosen. The estimated expence of repairing both, is made good, either by the landlord, or out-way going tenant. The premises being declared to be put in *tenantable condition*, the in-coming possessor becomes bound, at the expiration of his lease, to leave them so.

Inclosing—Such parts of the arable land as will not injure or incommode the flock, is right, but this is to be done with the utmost caution: when otherwise, it is often extremely injurious to stock, and ruinous to the fences made. If possible, one side or angle of the farm is to be chosen for these purposes, where it can be done without breaking in upon any material part of the grazing quarter, which requires to be preserved entire. The tract of country, necessary for a free range for the flocks, uninterruptedly to brouze in the most advantageous manner, must necessarily be the first object.

If other advantages can be attained, and a separate tract for inclosing could be reserved in the vicinity of the farm steading, properly watered, and accommodated with shelter, this would be the most eligible tract for inclosing.

Labour, Servants' Wages, &c.—Although this part of the county is but thinly peopled, the farmers have in general a command of hands for all sorts of work. Often in harvest, they supply themselves with shearers from the weekly markets of Haddington and Linton, where they find them in plenty: their wages from sixpence to one shilling per day, with victuals.

Other servants and labourers are, in respect of gains, much the same as in the Merse. Single servants wages, with victuals in the house, about 7l. Married servants, or hinds, are paid partly in grain, and grazing their sheep and cows, as in the low country, where their articles of bargain will be particularly stated; the whole of which may amount to about 15 or 16l. per annum. Maid servants wages are rather higher here than in the Merse. This difference may be occasioned, by the drudgery and excessive hard labour to which they are subjected, especially in the summer months. Their milkings, and other out of door work, begin, and hardly finish with the sun. These generally have forty shillings in the summer half year; and some very good dairy women have 3l. besides some small perquisites; and 4l. per annum is common for ordinary women servants. Herds are numerous here, and always on the same footing with the hinds: a house, little garden spot, grazing, gain, &c.

Plantations.—These have, in many parts of this high country, been tried with much success: the Scotch pine, or fir, is a tree the most proper of any; and, when planted upon dry moors, will prosper even to the tops of the highest of the Lammermoor hills. The larix also will do well upon rocky hill sides. Other trees, of a high station, such as the birch, mountain-ash, alder, &c. may be planted in the higher parts; the oak, ash, elm, and

* Birley-men. Country farmers, distinguished for their knowledge and integrity, in judging and appreciating all sort of country affairs; and are upon oath before the Justices of the Peace.

beech,

beech, in a less elevated situation, and sheltered; and, in swamps and wet bottoms, the Abel and Huntington willow, and Norway spruce-fir, will thrive well.

It is unnecessary to mention how fruitless it would be in a sheep country, to attempt any thing of this kind, unless the greatest precautions are taken, in completely inclosing, previous to, and the first step of this work.

Of the utility and profit of such works in Lammermoor, no better proof can be given, than the amazing improvement made upon these high moors, around many miles of the estate of Mellarstane, in this county. But, upon a much smaller scale, plantations might be executed upon any estate or farm; and, by judiciously doing so, would in time answer all the purposes of wood; shelter from the storm, and in particular places, for the flocks and herds, especially of the younger cattle; and, of course, would also beautify and ornament the country.

Woods.—Natural woods are few; and except Pemnashill wood, the property of Sir JAMES HALL, on the estate of Dunglass, there are none of considerable extent. This last consists of about one hundred acres, chiefly of oaks; about the half of which have been cut since the year 1750, but none since the last ten years; and the remainder are as old as the present century.

Woods, or large plantations, I humbly think, might, without prejudicing the sheep-pasture, be attempted with success, upon different places on the banks of the Whitater, at present of little use as pasture. These would be easily inclosed, being full of stones. The quick progress they would make there, would in a short time become an object of profit, and shelter, inconceivably beyond what they have at present. About the abbey of St. Bathan's, Shanabank, and such places; likewise some miles higher up, in the parish of Cranshaws; where woods formerly abounded, upon the banks of the Whitater, now not a tree or bush is to be seen.

Fencing.—The country here, except in very rare instances, is almost entirely uninclosed. If such were in particular situations to be attempted, the mode of doing it is undoubtedly stone fences; and more especially as the materials are to be got ready at hand, in most parts of this high country. Faced dykes are a saving of stones, carriage, and other expences; but are in the end more expensive than the *Galloway dykes*. But if these are attempted, a set of dykers from that country ought to be employed, otherwise it is only laying out money to little purpose, and in the end you are disappointed. The perfection to which that branch of mason craft is now arrived in the west of Scotland, is astonishing, which in other places is only badly imitated.

The other modes of fencing will naturally be treated of, when we come to consider the low part of the county.

Roads.—The direction of the two great English roads, lying across the east and western extremities of the county of Berwick, have been one great mean of beginning and accelerating the progress of agriculture, and of course raising the value of property in this county. And there are also now other roads made, and going forward, in the interior parts of the county: such are the roads from Cockburnspath over Ecklie Edge to Dunse, and to Chirnside by another branch, &c. By all these, the access to coal and lime in the Lothians is rendered easy, though formerly impracticable, even in the driest seasons, for wheel carriages. Ready access is also now presented to the farmer, for a speedy conveyance of the produce of his farm, either in corn, or live stock; which is also

also no small advantage to the Merse tenants themselves; as the markets of Dunbar, Haddington, Dalkeith, and Edinburgh, are their daily resort.

As the subject of roads, fairs and markets, must necessarily come before us in another place, we shall not here anticipate.

Live Stock—I have observed above, that very considerable improvements in both the breed of sheep and black-cattle, have already taken place in different parts of this district, and other facts, it is hoped, will still accumulate, all tending to lead to the same end. To our knowledge, wool shorn upon the same farm twenty-five years ago, that sold at seven shillings, is now at fifteen or sixteen shillings. The mutton, then about 10lb. per quarter, now weighs at an average 22lb. But it must be remembered, that the farm then let by the lump at 110l. is now at 260l. so much is the pasture here also improved; and others in this country, are in the same progressive state of improvement.

But although individuals have thus far advanced their stock, it must be confessed, the greatest part of the sheep in this bleak tract of country, especially the interior parts of it, are still of the small black-faced kind; and, till the lands are meliorated, they are at present perhaps the best of any for these high grounds. They are in general sold lean: dinmots, of three years old, at nine or ten guineas per score; great ewes about thirteen shillings each. Their wool is coarse, all laid, and is heavy, or much tarred: sells now about ten shillings and sixpence per stone; formerly at five shillings and sixpence, or six shillings.

Black-Cattle.—Though individuals have been of late paying attention to crossing their breed with bulls of a better kind, they have, however, in general, been less successful in improving their stock of black-cattle than their sheep. They are of a small bone, when compared to the Merse cattle. They weigh, at an average, about twenty-five stone, and sell from 4l. to 6l. each. There are a good many bred for sale in Lammermoor. Taking in Lauderdale, their numbers must be very great, when, in the parish of Westruther alone, they are ascertained to be seven hundred.

Horses.—Though they have long paid attention to the breed of horses, they have not hitherto succeeded perfectly, in getting into those of form proper for the country. The round barrelled, short bodied, with strong limbs, and not above thirteen or fourteen hands high, are the profitable drudges for dispatch of business, and keep, by decent management, always in good condition. There are few or no horses bred here for sale; but the farmers all breed for serving the purposes of their labour, riding, &c. and sometimes sell a colt or two. Although some here labour with oxen, horses are, upon account of the distant carriages to markets and manure, more generally used.

Tillage and Cropping.—Although, in general, corn-husbandry is not by any means the ultimate view of the greatest part of the farmers in Lammermoor, yet it is sometimes an object of attention, and highly advantageous, both as a present emolument, and accessary in its consequences, for promoting his ultimate views; the improvement of live-stock, melioration of his wool, &c.

In many places of Lammermoor, the husbandry of turnips is practised, and its advantages well understood by many farmers here. And, it is to be hoped, that the practice will soon become general, and fields of turnips overspread this country, as they already do along the water sides and haughs of the Whitater and Dye; and in Lauderdale, they abound every where.

1st, Turnips are followed successfully by
2d, Barley or bigg, sown grass, both as hay and an enlargement of pasture, which when broke up,
3d, Oats, after which some sow
4th, Pease, succeeded by
5th, Barley and grass-seeds.

In very severe frosts, the turnips here are very apt to rot, especially if much wet weather in spring sets in after the frost; therefore clover-hay is above every other crop to be considered as the most certain and safe resource yet known for spring food.

In every country so situated as the one here treated of, where spring rains often retard the seed-time to an undue season, the country being bleak, and early in autumn, on the approach of long nights, frosty mornings often overtake, in its embryo state, the tender germ, whereby the future hopes of the industrious husbandman are blasted; it becomes, for this reason, a great object for him to sow as early as the season will permit; and, above all, to procure the earliest kinds of grain for seed.

Red Oats are already introduced here, and found to be the greatest acquisition hitherto known: by frequently changing the seed, they will long continue to be so.

Bigg, in place of barley, has been long known to ripen at least two weeks earlier than the latter; and the price good big will give in a market, will not fall short, rather exceed, barley of an inferior quality, which is always the case from moor land, let it be ever so well prepared.

Rotation of Crops.—As the practices and different opinions of farmers, upon this branch of rural œconomy, are so various, I shall only, in addition to what is mentioned above, beg leave to subjoin, in a single instance, the practice of one of the most experienced farmers in this high moorish country*; which, for improving a hilly district, we believe, cannot be excelled.

1st year, Turnips well dunged,
2d —— Barley or oats,
3d —— Clover,
4th —— Oats,
5th —— Turnips well dunged.

This also is the course used by Mr. Dawson, of Frogden, and by all the best farmers in Roxburgh-shire, upon their light or moorish lands.

* Mr. Brodie at Upper Keith.

SECTION

SECTION II.

OF THE MERSE, OR LOW COUNTRY DISTRICT OF BERWICKSHIRE.

Merse—its Boundary.—In the preceding part of this paper, I attempted to give a general outline of the county of Berwick, followed by a statement of the content in square miles and acres: by the state there given, the Merse contains about 148 square miles, or 94,720 square acres.

The northern boundary of this district, as stated above, proceeds from Home Castle on the west, Greenlaw, Polwarth, Dunse, Lintlaws, Preston, and so to the sea, at Coldinghame. In all this tract, south as far as the Tweed, there are no hills, or any elevation deserving the name, except Lammerton hills, beyond Ayton, on the east; and on the west, that lofty eminence upon which stands Home Castle. This whole tract of country, viewed from a central eminence, Langton Edge suppose, exhibits to the wondering eye, a scene beyond description. The deception from this high elevation is so great, that this large tract, from near Kelso to Berwick, sixteen or eighteen miles, and nine over, appears a dead flat, chequered with numberless seats and plantations; the whole landscape assuming the appearance of a garden.

The uniform flatness of the country is, however, not so in fact, for gentle acclivities, or ridges, are less or more interspersed throughout the whole. Upon these ridges and sloping banks, the tillage and corn husbandry have always been carried on.

The Soil here, in general, is deep and fertile. In the lower parishes of the county, Swinton and Ladykirk, very much of the land is inclined to a heavy clay; which also is the case in many other parts of the Merse. The management, therefore, both in ploughing and sowing, becomes in wet seasons a matter of serious attention.

The lower parts of the county being in general heavy deep clays, they are cultivated with wheat, barley, &c. and a great proportion of sown grass. Turnips in this wet soil are rarely seen, till you ascend higher up the country: the parishes of Whitsom, Fogo, Dunse, &c. where the turnip soil abounds, and there they are seen every where in perfection.

Previous to the view here intended to be given, of the present state of agricultural practices in the Merse, it may not be improper to take a brief view of the state of the country fifty or sixty years ago, and to mention a few of those individuals, who have had the merit of leading the way, in this great work of improving the agriculture of the county.

THE PROGRESS OF HUSBANDRY IN BERWICKSHIRE.

Having been employed for many years, in conducting agricultural improvements in Berwickshire, which has furnished me with materials for giving some account of the rise, progress, and present advanced state of husbandry in that county, this I shall attempt to do, in the shortest and simplest way I am capable of.

In their tillage, and rural œconomy, the proprietors of that county had been left far behind by their southern neighbours. The farmers also, having cheap and long leases, could, without any exertion on their part, easily pay their rent, and live as their fathers had done. Their tillage was performed, for the most part, with oxen, and confined

fined to a small portion of the farm, which they distinguished into outfield and croft-land; the latter was in constant occupation, and required the whole dung made on the farm: the outfield, broke up for oats without receiving any manure, was scourged with repeated cropping, as long as it would yield the seed, or little more; it was then abandoned to the slow process of nature, to renew its former verdure. The ridges were broad, and of a serpentine form, rising to a great height in the middle. There was no summer fallow, green crops, or hardly any sown grass: except their farm cattle's dung, there was no other manure.

Lime and Marl—Their uses in agriculture were utterly unknown. Their working beasts, starved with hunger, could not do half work: their hay was of the coarsest quality cut, from the bogs, and straw a very scanty crop. Thistles, a very hurtful weed*, were collected in abundance from their best land, and given to the horses as food.

Their implements of husbandry were few, and ill constructed. About fifty or sixty years ago, there was hardly a farmer who had a cart in his possession. The coupe, drawn by a pole, with oxen, a car, or sledge, and a small cart, the axle whereof turned round with the wheels; the plough was a very bad construction of the old Scots plough; its enormous weight, and length of the head, were oppressive, even when yoked with six or eight oxen.

The picture here given, might have been pourtrayed to a much greater length, but let it suffice to mention briefly the general state of the country respecting inclosing and plantations: there were none but those of some of the old family seats. There was no such thing as an inclosed farm. The poor starved cattle and sheep were kept in a perpetual state of alarm by herds and their dogs.

The state of the roads, also, especially in the lower part of the county, in the whole of the winter season, for horses, was completely shut up. The lands every where being open, were smashed, pitted, and laid under water the whole winter season, with continual poaching. These facts, though well known to our ancestors, are now but an unpleasant theme; we therefore upon the sequel throw a veil, and pass on to a more interesting scene.

Change of System.—In every country, it is most natural to expect that improvements in the arts, or police of any state, shall originate in the understanding of some enlightened individual. At the period above described, the farmers were not possessed with that spirit of enterprize and activity so eminent in their successors. It also required an independence of fortune, for one, though possessing the boldness, and judgment, to plan out and execute experiments in agriculture, that he might steadily pursue his plan to the end: this was happily the case in the present instance.

About the year 1730, impelled by a spirit of patriotism as well as interest, one gentleman of great ability, and zeal for the public good, Mr. SWINTON of Swinton, the father of the present Lord of that name, in the course of a few years, drained, marled, and completely inclosed his whole estate, which is still the best inclosed estate in the Merse, and the fences the best taken care of.

Mr. HUME of Eccles, it is believed, began the improvement of his estate also much about the same time. Both these gentlemen had conversed with, and seen the ad-

* Seratula arvensis. LIN.

vanced state of husbandry improvements at Ormiston, the seat of Mr. COCKBURN, at that time the leading agricultural improver in Scotland. This celebrated patriot, not only inclosed his whole estate, and taught his tenants to improve their farms, in the best stile of English farming at that time extant, but also gave them advantageous leases, and established upon a proper foundation, an agricultural society, which it is believed exists at this day.

Lord KAIMES also, whose early ardour in the same pursuits, marks him in the honourable list, as one of the early improvers in this county, about the year 1746, at Kaimes, had turnip fields dressed, and cattle fed with the produce, which were the first turnips sown in this county for the express purpose of feeding cattle.

Potatoes also, were cultivated with the plough, before any other, in this county. Turnip, as a fallow, has most certainly been one of the greatest attainments in modern husbandry; although the value of turnip, as a food for cattle, had been known some years prior to 1750, and were sown in small patches, but left to struggle for themselves; they were never hoed; being sown too late in the season, they were small; and their culture not being well understood, they were in every sense mismanaged. However, with all those disadvantages, their usefulness was visible. Clover, and the artificial grasses, were also sown at Kaimes in abundance, and at sundry other places about the year 1750.

Here then, in the course of less than twenty years, whole estates are inclosed, and fences thriving. The use of marl is understood and practised; vegetables hitherto unknown, except in our gardens, are now seen, to infinitely greater perfection, flourishing under the culture of the plough. Presently after this period, and about 1750, the ardour of inclosing and improving their estates became a favourite pursuit with many others of the landed proprietors of this county.

Exertions by Individuals.—Mr. RENTON of Lammerton, upon his estate of Blackater, at this time began, and very rapidly pushed on, the improvement of that part of his estate, which was done in a more masterly manner than any thing of the kind hitherto done in this county. Others also, Mr. HUME of Ninewells, for his early as well as substantial mode of manuring with marl, had none equal to him.

JOHN MOLL, Esq. of Mains, was indefatigable in pursuing the same method. He also paid much greater attention to improving his breed of sheep, and particularly in meliorating their wool, than I believe had at any former time been done in the county.

Mr. FORDYCE of Ayton, though a little later than these, profited by all the preceding discoveries. In inclosing his estate, he sheltered his fields with belts and clumps of planting upon the exposed grounds, and added one more new plant, the Scots cabbage, to the husbandry of Berwickshire. He also built the steadings and farm offices, with all their different accommodations, to such a degree of perfection, that I do not know if they are yet exceeded, or rarely, if at all equalled, in the county. Not to be tedious, we shall mention Mr. LUMSDAINE, who also, upon his estate of Blanerne, added many new plantations to those which his father had done, who was one of the earliest planters in this county. Beside inclosing and improving his whole estate, he was among the first who cultivated turnips and cabbage to any extent, in his fields, in that part of the county. He also introduced the Essex oats, Siberian barley, and carrots in the fields, with success.

Dr,

Dr. HUTTON likewise, who had for many years, in the pursuit of science, studied the philosophic principles of agriculture and vegetation, being a considerable landed proprietor in this county*, began about this time to turn his attention toward practical agriculture, for the improvement of his estate. Not being fully satisfied, however, with the present husbandry practices, great as they were, in this county, he thought they might still be improved; for which purpose the Doctor went into the county of Norfolk. This county is of a light dry soil, in several respects corresponding with his own property; that county having at that time attained to the highest degree of perfection in all the different branches of practical agriculture, implements of husbandry, &c. Having long resided there, he informed himself completely in every branch of country business; hired, or rather bribed, a Norfolk ploughman, who, with his family, came into Scotland, bringing along with him his own country ploughs, turnip-hoes, and other husbandry implements.

Furnished with all these advantages, the Doctor now began in good earnest to improve a very wild and uncultivated piece of land; all of it was an open field; stones were to be split; fences were made at a great expence, being on the border of a sheep country; drains also innumerable. The tillage also was all performed with the Norfolk plough; dressing the land, drilling and hoeing the turnips, rolling, and all the operations of husbandry, were done to a degree of neatness and garden-like culture, which in farming, had not been seen here before. Persons of every description came from all quarters, to gratify their curiosity, as well as get information. A minute detail of all the improved practices here, would be inconsistent with the plan of this paper. We only beg leave to observe, that the Doctor, in his whole plan, however expensive, has completely succeeded, and obtained all his purposes. The fences are well taken care of, and quite complete. The land was let long ago at one guinea an English acre, and is perhaps higher at this time. In the former state of the land, I much doubt if any farmer would, upon an average, have taken it at above three shillings an acre over all. The farms are, by all accounts, a good bargain, and six hundred per cent. will, I hope, reward the worthy proprietor for this noble exertion in the service of his country. To crown all; in this happy period, this golden age of husbandry, there lived men in the less elevated walks of life, farmers in different parts of the county, whose penetration and sound judgment did not suffer them long to continue idle spectators of the scenes here displayed; they saw at once the consequences whereunto all this would lead: they therefore lost no time in securing new leases of their farms, though at an advance of thirty to one hundred per cent. Inclosing, marling, liming, where marl could not be had; all went in the most spirited manner: the seasonable interference of this class of men gave new life and vigour to what had been already begun by the proprietors. Were I in particular to mention in this honourable list, names so respectable as the LOGANS, HOODS, JOHNSTONS, and many others, whose genius, not to say cultivated all the above branches to a pitch formerly unknown in this county, but also struck out new paths, especially in feeding, and in breeding both cattle and sheep, improving wool, &c. which formerly were not attended to. In this way has the wealth and fertility of the county increased within these sixty years: the land rent above quadruple, and stock upon the ground much more. By a vigorous pursuit in these improvements in husban-

* Sleigh-houses, four miles east from the town of Dunse.

dry, in the course of four or five years, one estate rose in rent from 500l. to 1200l.; another 500l. to 1500l. per annum. The tenants are all thriving, some of them frequently making purchases of land, to the amount of four or five thousand pounds and upwards.

About this time also, occurred another very fortunate circumstance, which tended greatly to facilitate the exertions of the husbandman, by furnishing him with all sorts of husbandry implements, constructed upon a more simple and scientific plan than had formerly been known in this country.*

Soil.—The soil here, as above observed, strong clays, are prevalent in the lower parts of the country, almost wholly destitute of stones or gravel; but higher up in the Merse, towards Dunse, the lands grow lighter, more kindly for grass, and the turnip husbandry. Water for cattle, and materials for roads, are also here in plenty.

Climate.—This part of the county lies but very little above the sea-level, for at Kelso bridge, twenty miles from the sea, there are only ninety feet of elevation. The air is therefore mild, lying in the middle space between the Cheviot and Lammermoor ridges of hills, where heavy rains are neither so frequent, or of such continuance, as in the vicinity of those mountains. Though snow lies a long time some seasons in the Lammermoor district, and to a great depth, its continuance here, in the low country, is only a few days. About the time of the autumnal equinox, there is sometimes very tempestuous weather on the east coast. The year 1775 was a remarkable rainy harvest. On September 27th, with a stormy wind from the north east, and having rains incessantly for the two preceding days, the Whitater rose higher than ever it had been known, and its two largest bridges were wholly swept away.

Inhabitants, Character, and Occupation.—Before proceeding to give in detail the practices in agriculture, we shall premise a few strictures on the leading features of the different ranks of society in this county.

Berwickshire, both in ancient and modern times, has abounded with famous men, warriors, statesmen, and philosophers; the DOUGLASSES, and in our own times, the noble families of HOME, MARCHMONT, MELLARSTONS, &c. Hence in the field the warrior frowned, and in the senate the patriot burned, for the glory of his country! The pen, not less distinguished here than the sword, has been long celebrated

* JAMES SMALL, an ingenious mechanic, who for the services he rendered, in promoting the agriculture of this county, and of Scotland at large, as a native, is deserving of particular mention in this work. Having about 1764 returned from England to Berwickshire, where very little was then known of the construction of wheel carriages, and still less of the mechanical principles of the plough; a good plough or cart being obliged to be brought from Northumberland many miles off; this young man appeared: JOHN RENTON, Esq. of Lammerton, a zealous promoter of the agriculture of this county, saw at once this man to be the only individual wanted fully to accomplish all their designs. Mr. RENTON, therefore, immediately settled him at Blackater Mount, erected all the necessary buildings for a smith and carpenter's manufactory; set him agoing with cash, and gave him credit; and forthwith twenty, and sometimes upwards, of carpenters, six or eight smiths, and many other hands, were constantly employed. Hence issued out numbers of ploughs, carts, waggons, large and small, and all the different implements of husbandry in abundance. His plough was particularly admired, and is sought after to this day. The plough hitherto used here, was drawn either by four horses, or four oxen and two horses, with hard labour; and in quantity ploughed, it fell far short of the present two horse plough without any driver.

The carts also made here, were sent to the remotest parts of Scotland: thus he went on for many years.—Happy for this ingenious artist, if in the future career of life, he had finished upon the same plan on which he set out!

in

in the historic page of HUME the philosopher, who spent his youthful days at Ninewells.

The great KAIMES himself, whose versatile genius cultivated and improved almost every subject in philosophy and polite literature, and whose treatise on agriculture is still the best we have; he also was the pride of Berwickshire, and the glory of Britain. From hence also, both the bar and the bench have received some others of its greatest ornaments.

Country Gentlemen—Proprietors of Land.—It has been in various instances shewn above, how much their country owes to the spirited exertions and energy wherewith they first set agoing the improved plan of a rational system of agriculture, which at the present time is not inferior to any other county in Britain.

They granted favourable leases to tenants, abolishing the oppressive servitudes hitherto existing; inclosed, built steadings convenient and useful, and spared no kind of expence in encouraging the industrious active farmer.

Farmers.—The tenants here, are now a respectable and numerous body of inhabitants. Many of them eminent in their own profession, and some have acquired a knowledge in mechanics, and other sciences connected therewith. Their families are genteel, their children properly educated, and set out in the sundry professions suitable to their wishes; and many of those who were the early cultivators, still living, or their sons, and in possession of well-earned wealth.

There being hardly any manufactures in this county, the bulk of the inhabitants, both men and women, are wholly employed in works of husbandry, either in cultivating potatoes, garden-stuff, &c. for themselves, or hoeing turnips, hay-harvest, and other country work about the neighbouring farms, ditching, hedging, &c. Masons, smiths, wheel-wrights, and others connected with the farmer, generally live upon every estate in the country.

Men.—Ploughmen and country servants are numerous here; strong, robust and healthy; rather above the middle size, apt to learn every thing connected with their profession; very intelligent, and fond to receive instruction; are not given to religious disputes; are sober, frank and honest; generally good servants.

Women—Are strong and muscular, much more inclined to work out of doors than to household work. They are tractable to receive instruction; and, though much addicted to smoaking tobacco, are sober and honest.

Having now finished these short sketches, I must here take the liberty to mention an individual of our own species, born in the Merse, who for his gigantic stature, it is believed is not at present equalled in Britain, *George Buickles.* His age at this time is about twenty-six years, his height seven feet four inches; according to others, seven feet six. He teaches a parish school in the Merse.

Principal Towns.—Greenlaw, where the courts of justice meet, and where the other public business of the county is transacted, is in other respects only to be considered as an obscure country village. Since its becoming a thoroughfare and stage upon the London road, it is considerably increased in population, and its parish is one of those bordering on Lammermoor, and stretching a great way up into that country. There

are

are no manufactures, and only a few mechanics and shop-keepers, for accommodating the country people.

Dunse, in respect of population, trade, the annual fairs, number of genteel families, schools, religious houses, &c. must be considered, as it certainly is, the principal town in the county. The number of inhabitants in the town only, by an exact list taken in 1790, was 2324. For its prosperity they are much indebted to their late benevolent and worthy superior, the father of the present ROBERT HAY, Esq. of Drummelzier.

The town of Dunse is situate nearly in the centre of the county; its latitude is 55°. 42′. Dunse is also a parish bordering on, and stretching up into Lammermoor; but the lower part is fertile in all kinds of grain, turnips and grass. Its weekly market on Wednesday, accommodates the whole country round. Its public works are a bleaching-field, and a large brewery. The bleaching-field is on a small scale. The brewery employs a great number of hands throughout the year. The grain consumed here must also be very considerable.

Eyemouth, a small sea-port town, situated at the conflux of the river Eye with the German ocean*, is the only sea-port in this county At the beginning of the present century, this was a mean fishing town, which rose into great repute by smuggling. But the trade here was soon turned into a better channel: a harbour, and sea-port for exporting grain, the produce of the county, was much wanted, and in 1750, a beginning was undertaken, under the eye of the famous SMEATON; 2000 l. was subscribed; and in 1770, a second subscription of 2500l. more was expended upon the same useful work.

N. B. This last effort only, was conducted by Mr. SMEATON.

By opening a corn trade here, it has given many advantages to the Merse farmers: many dealers in grain soon settled here. By these means the farmers were less exposed to a combination of corn dealers in Berwick or Dunbar, the only markets formerly in use.

The merchants here soon became numerous and respectable. Besides the corn, they opened an importation trade to the Baltic, for timber, iron, pitch and tar; all sorts of heavy goods were as readily got here as at Berwick. Corn and meal have been shipped here for Leith, and other markets, to the extent of twenty thousand bolls annually, and in some years, more than double that quantity.

A white, and herring fishery; also lobsters, and other testaceous fishes, are all taken here in their season. But a general rage for smuggling (that mania of trade), gave a dismal stroke to this flow of prosperity!

Merchants here, as farmers, made a great reform in the old husbandry: neat hedges were raised, fields of turnips, sown grass, and the best practices in agriculture, were to be seen here, and that baneful trade long since, is now laid totally aside.

Coldstream, which lies about fifteen miles up the Tweed, above Berwick, was only a small country village. The inhabitants of the whole parish, according to Doctor WEBSTER's account, about forty years ago, were only 1493. By a survey made in 1786, in the town alone there were 1162, and the parish at large contained 2017. Since the building of the bridge over the Tweed, the village has become a great

* About seven miles to the northward of Berwick.

thorough-

thoroughfare upon the English road. Though there are no manufactures, this town is increasing in population every year.

The soil here is rich, and highly cultivated; their harvests are earlier than any in the country: last harvest, 1793, there was much ripe corn, and harvest began, before the middle of August.

Lauder, the only royal burgh in the county, was, before the great English road came this way, a very poor place: since that time, within the course of thirty years, population and wealth have been gradually increasing; the increase since Doctor WEBSTER's survey, is rather more than one-seventh. There were in the burgh at last survey, 1000 persons. Though there are no manufactures here, cultivation is carried to a great perfection. In the neighbourhood of Lauder, land lets from twenty to forty shillings per acre.

Besides these five more noted towns, there are several thriving villages: Ayton and Chirnside are remarkably so. The former contains 530, the latter 609 inhabitants, at this time. A monopoly of farms may have checked the increase of population in the country part of the parishes here; but there are ample additions made in the county at large, by the increased numbers of inhabitants in towns, and in extending the old, and building new villages.

Population.—Berwickshire, for its extent, is upon the whole but thinly peopled; distance from fuel, want of roads and bridges, made manufactures impracticable, and except those hands employed in cultivating the soil, none other could be retained. Towns and villages have indeed been on the increase, and are so still. The town of Dunse, according to Doctor BOWMAKER's account, is a remarkable instance, within these sixty years, having doubled its inhabitants; a bleaching-field and large brewery, a well-frequented weekly market also. There are three Seceding meeting-houses in this town.

Eyemouth, according to the account given by the Rev. Mr. TOD, can only boast of having added 200 to its number forty years ago; the whole parish having then 792, which in 1790 amounted to 1000 souls; hence, one-fifth nearly of increase.

To illustrate what has been above suggested, respecting the present state of inhabitants, or population of Berwickshire, there is here subjoined a table of five parishes, taken promiscuously in each of the districts, whereunto the county has in this survey been divided. No other predilection has been made in the choice, than having the parishes selected, where the one district of the county has no interference with the other; and that they should be equally dispersed over the whole district.

THE MERSE DISTRICT.

	Survey taken in 1750.	Survey taken in 1791.	Increase.
Swinton -	494	898	404—Nearly double.
Huton -	751	920	169—One-fifth.
Ayton -	640	1245	605—Nearly double.
Ladykirk -	386	600	214—One-third.
Eccles -	1489	1780	291—One-sixth.

LAMMERMOOR DISTRICT.

	Survey taken in 1750.	Survey taken in 1791.	Increase.
Longformachus -	542	——	——This parish has decreased.
Lauder -	1714	2000	286—One-seventh.
Bunckle -	691	622	——Diminished one-ninth nearly
Cranshaws -	214	164	——Ditto one-fourth.
Westruther -	591	730	——Increase nearly one-fifth.

This, though it by no means ascertains the population of the county at large, which in a short time will be clearly established, shews in the mean time, among other things, that the Lammermoor district, if not stationary, is losing little of its former population. And the Merse, though the increase of population, in the present state of the country, is not in the same ratio as of Scotland at large, has within the course of half a century, been increasing in a certain proportion.

It may perhaps be doubtful, whether the country part of the Merse parishes, have in the course of the last forty years, increased any thing at all, owing to the monopolizing of farms since that period. In Swinton parish, the country part is known to have decreased; it probably is the same in some others.

The increase of population in towns, erecting new villages, and the old ones much enlarged, all tend to shew, that the population of the district at large, has increased since that time.

Estates, and Management.—What has already been observed, respecting the early exertions of many landed proprietors, in promoting the agriculture of the county, proves that they were then good practical farmers, and many of them are so still.

Landed estates are, generally speaking, of a middling size; few, if any, are so high at present within the county as 5000l. per annum: in general, they are rather from 300l. to 2000l. Few of the country gentlemen, now chuse to carry agricultural pursuits to such an extent as was formerly done from necessity. At the present time, a race of wealthy, intelligent young men, the sons of those veterans, the early promoters of the present prosperity of the county, being all good judges of the value of land, find it more advantageous to let their farms on leases, to be improved by their tenants.

Length of Leases.—Upon an arable farm, the leases here are in general for twenty-one years. The entry to the houses and grass at Whitsunday, and to the arable land at Martinmas.

Rents here are now all paid in money; all kain, carriages, and other servitudes, are now quite abolished. The terms for payment of rent, for an arable farm, are at Candlemas and Martinmas, annually; but some farms are what is called back-rented, that is to say, the rents are not payable till Candlemas and Martinmas twelve-months after entry. Grass grounds are entered to at Christmas, or Candlemas, and given up at the same terms. The rents of grass-lands are payable at Martinmas and Candlemas first after entry.

Covenants and Prestations.—Tenants, previous to their entry, have the houses or farm steadings, also the whole fences, inspected by persons mutually chosen; their decision and estimate of expence of reparation, is equally binding upon both landlord and tenant, and is made good either by the outgoing tenant or landlord. The whole being put

put into tenantable condition, is, during the currency of the lease, to be kept in good and sufficient repair, and left so at the expiration. The fences keeping up, and rearing young hedges, has very generally devolved upon the tenant, and the whole management left to his discretion, as well as the expence. In other instances, the landlords, seeing the gross abuses committed, and the fences precipitating into ruin, have taken the whole of the management and expence upon themselves; but troublesome tenants have also even made this mode vexatious to the proprietor. Those gentlemen who have succeeded best here, in rearing their young hedges, and bringing the old ones to the greatest possible perfection, have bound the tenant, at his entry, to pay the one half of the expence of repairing all kinds of fences. The proprietor retaining the sole management, he produces his accompts to the tenant at rent time, when they are settled annually. Subsetting and non-residence are, in general, disallowed here. Hay may be sold, but no straw can be sold off the farm.

Steel-bow straw*, is a general and necessary condition in almost every lease in the county. It is unnecessary here to mention the many advantages of accommodation arising from this institution: the dung also upon the farm, is a prestation of the same kind as the former. Stipulations are also entered into, respecting manuring and cropping the lands; but of these, more will necessarily occur, in treating on another head. Stipulations respecting the state in which lands are to be left at the expiration of the lease, are more necessary in this place. Tillage, in general, upon a well cultivated farm, ought never to occupy more than one-third of the arable land, in this county: the case is different near great cities, where a constant command of dung is always ready. But more especially in the last years of the lease, innovations in cropping ought to be strictly guarded against by the covenants: that there may be old grass, a hay-field, fallow, or a turnip crop, &c.; that no unnecessary interruption be given to the general œconomy of the farm.

Rent of Land.—In the Merse district, all land is let by the acre, English measure. In Lammermoor, although the extent in acres is generally known, farms there are let in cumulo, good and bad for a certain sum over all. The value of land in both districts, within these last forty years, has rose very considerably, more especially in the Merse, and in Lauderdale. To avoid, however, all speculation, not founded on facts, as the basis of all sound reasoning, those will be much more correctly ascertained from the obliging assistance of proprietors themselves, when this paper comes to be circulated in the county. Some examples might here be introduced, from the writer's own knowledge, but these are so few, that no general average could with propriety be drawn, or conclusions formed, which could be depended upon fairly to ascertain, either the progressive increase of landed property, or its extent in the county at this time.

In the Merse district, it would appear from a statement made of six different parishes, taken in the best cultivated parts over the county, from Ayton to Eccles, that the medium price of land, is nineteen shillings per acre, when let in whole farms: perhaps when information is more fully obtained, the average price may come out to be rather a little lower.

Although great sums have been expended in agricultural improvements, lately in this county, they are, however, amply repaid by the increase of rent: instance two

* A permanent right, established by ancient use, whereby the incoming tenant, without any expence, enters to possession of the straw of last year's crop; and he becomes bound to leave the same to his successor.

estates in the neighbourhood of Dunse, neither of which exceeded 500l. per annum; one, which was manured with lime, and partly with marl, in the course of a few years rose to 1500l. per annum; the other was manured, for the greatest part, with marl, and rose to 1200l. per annum.

Farms—Size.—The farms in Berwickshire are generally large; which, though it proves lucrative to individuals, is hurtful to the country, depriving it of many useful and enterprising young men, who find it necessary to seek for farms elsewhere. There are many farms in the Merse, which contain from 500 to 900 acres. This measure was perhaps necessary, in the uncultivated state of the country; as without having able and intelligent farmers, possessed also of capital to lay out in such works, no extensive tract of wild country can ever be subdued; and a man of this description could make no effort whatever in such a farm, as was so called fifty years ago. The case is now quite altered: the country is in general in a high state of cultivation. By now reducing the size of those larger farms, and bringing the whole nearer to an equality, the population of the county would more rapidly increase, and cultivation might still attain, even to higher degrees of perfection than it has hitherto done.

To what extent the larger farms of this county might be reduced, is a problem not to be solved by any but the judicious proprietors of land themselves. Some have curtailed farms, for no other reason than because, according to their idea, they were too large; others, being jealous of the successful industry of a thriving set of tenants upon their lands, have reduced the size of their farms, and got smaller tenants; and many others, upon viewing the general state of prosperity wherewith the industry of the Merse tenants has been rewarded, there having, in sundry instances, purchases been made by this very deserving order of men, of some small pieces of land: perhaps the most judicious way, in these times, in which they could secure a few thousand or hundred pounds, till their families are provided for. This, very possibly, has also been given as another cause for the reduction of farms.

The Merse farmers, it must be remembered, possess, by their local situation, peculiar resources for money making, which no others in Scotland have: they are all, from their earliest years, trained up in the knowledge of cattle, in which they are eminent. They are, almost to a man, dealers or jobbers; many also deal in sheep; and more money is often made in successful marketing, than in the produce of the farm. In fine, the size of farms, it is apprehended, ought neither to be reduced from caprice, because it is fifty or a hundred acres more than a certain given quantity; nor because the tenants are thriving, and pay their rents punctually; much less still, because some very industrious men, by their superior skill, and good management, have in the routine of business, realized what all mankind are strongly for. Upon the whole, genius and enterprize are distinguishing features amongst individuals of every profession; and characters of this description seem, in the nature of things, to lay a foundation, by necessary consequence, for larger and smaller farms; not but that there may be still too many farms of the former description, especially if it must be acknowledged, but too few tenants of this description appear to occupy them.

Labour—Of all kinds, is carried on here with the greatest ease and expedition: hands for every work of the season, are in plenty. In conducting all sorts of country business, labourers rather chuse to engage for piece-work than day-labour, excepting in harvest, when little or none is done by piece.

Harvest

Harvest work is, in general, done by the hinds, cottagers, servants, and poor people from neighbouring villages, who hire for the harvest, three weeks, commonly so called. Others, who have very extensive farms, procure the extra hands wanted, weekly, from the Linton, Dunse, or Kelso hiring markets. The different orders of labourers in the county, are, hinds, who, with their families, reside in cottages, upon some part of the farm, commonly near the farm steading; some of these have houses not much worse than those of the farmers themselves formerly: to this they have also a small piece of inclosed garden ground, lying commonly behind the house. Their several gains* are stated as below; and altogether, upon an average of years, according to the rise and fall of victual, may be supposed nearly to amount to 16l. per annum.

The hind's emoluments are all paid in kind, from the produce of the farm. The several articles, as stated in the following table of the annual value of a hynd's boll:

	£.	s.	d.
To eight bolls of oats, at 14s. per boll,	5	12	0
Three bolls of barley, at 17s. per boll,	2	11	0
Two bolls of pease, at 13s. per boll,	1	6	0
One boll and a half of coals, at 6s. per boll,	0	9	0
Carriage of ditto,	0	2	6
Product of a firlot of potatoes,	0	18	0
Ditto of a peck of lintseed,	0	10	0
Maintenance of a cow,	3	0	0
Ditto of a calf, or follower, both throughout the year,	0	15	0
Two cart load of whins, for fuel,	0	5	0
Victuals throughout the harvest, and other incidents,	1	0	0
	£.16	8	6

In the above statement, the hind's house rent is not included, because, for this he always furnishes a reaper during the harvest, besides his own work.

The hind's work is, in winter, ploughing, and, as the season advances, sowing, &c. Mowing, leading manure to the farm, reaping, and stacking the corn, and all the operations requiring experience and dexterity, are entrusted to the hind: such, are sowing the corns, building the stacks, mowing and winning the hay, &c.

Hinds in Lammermoor, receive also their emoluments similar to the above; but in place of grain, they are allowed to pasture, along with the farmer's flocks, a certain number of sheep, milk cows, and other cattle. This makes it necessary that the Lammermoor hind should be possessed of some property, to enable him to put live stock to this amount upon a Lammermoor hindship, which is in the other case more easily obtained.

There are also barn-man hinds, who, except in hay and harvest time, are constantly employed in threshing, for which they are generally allowed the twenty-fifth part of the whole produce, for their labour. By the late introduction of threshing machines into this part of the county, the number of barn-man hinds will in time be much reduced, at least upon all the larger farms.

* Emoluments, so called.

Single Servants—Young men, from fourteen to twenty years of age; these, less or more, are retained in the farmer's own family, at bed and board; and are paid by the year, in money, which will be stated hereafter. Those young men are also employed in ploughing, carting, harrowing, hay and harvest work, &c. hoeing turnips also, in the season.

Women servants are all boarded within the farmer's family, and are paid in money; their work is generally out of doors; they also hoe turnips, work at hay, and harvest. There is not much, if any yarn, spun by servant maids in this county; but in many families here, there is a decent cleanliness, pleasant and healthful, in which the maid servants are much employed, for which their mistresses deserve great praise.

The table subjoined, will shew at one view the present state of labourers' wages in both districts of the county.

PRICES OF LABOUR IN THE MERSE DISTRICT.

	£.		
To hind's boll for one year, as before stated, - -	16	8	6
Single servants, per annum, - - -	7	7	0
Servant maids, ditto, - - - -	3	5	0
Barn-man hind, one twenty-fifth part of his threshing,			
Labourers, per day, - - - -	0	1	0
Ditto, in winter, - - - - -	0	0	10
Carpenter and mason, - - - -	0	1	6
Taylor, with victuals, - - - -	0	0	8
Mowers wages, per day, - - - -	0	1	6
Mowers, per acre, when a good crop, - -	0	2	6
Men reapers in harvest, with victuals, - -	0	1	0
Women ditto, ditto, - - - -	0	0	10

Piece-work.—Inclosing, with hedge and ditch: ditch, five feet by three deep, per fall of six yards, 8d.; ditch, six feet by three and a half, per fall, at 1s.

Horses are sometimes shoed at 10s. per annum, the smith furnishing the iron.

The tables of labourers and servants in both, are taken from an average of many parishes, and shew the medium over the county.

PRICES OF LABOUR IN LAMMERMOOR DISTRICT.

	£.		
Labouring servants, per annum, with victuals, - -	6	10	0
Maid servants, per annum, - - - -	3	10	0
Ditto, a good milker, summer half year, - -	3	0	0
Day labourers, - - - - -	0	1	0
Mason and carpenter, per day, - - - -	0	1	0
Women, good turnip hoers, 6d. to 8d.			
Taylor, with victuals, - - - - -	0	0	6

Hours of labour, at six in the morning, and end at six in the evening, in summer; at sun-rising and sun-setting, in winter, by all the labourers. The hinds and household servants are up at four or five in the morning, feeding their horses, and getting every thing in readiness to yoke by sun-rising. In winter, they go from eight in the morning till betwixt one and two in the afternoon; and in summer, the hinds yoke by sun-rising, loose the ploughs at nine, and rest till one o'clock. From one, they continue

tinue in the yoke till half after six in the evening; and the remainder of the evening is spent in looking after their horses and working cattle, and in making arrangements for the operations of the following day.

The farmers here possess one peculiar advantage, unknown in many other places, in their manner of procuring hinds, and servants of every description, both men and women. There are certain fixed market days in the towns of Dunse and Kelso, which are well known to both parties. There both masters and servants have a variety of choice. At Kelso, the two hiring market days are immediately preceding the terms of Whitsunday and Martinmas; and the next market day immediately after those terms. At Dunse the same custom of hiring servants prevails, but the days are different.

The mode of paying servants' wages in kind, is a good custom, both for the farmer and hind: it is peculiarly so for the latter.—Their plainness of dress, decency, and simplicity of manners, are very characteristic. They possess, from their own resources, every thing wanted to make life comfortable: their milk, meal and potatoes, as food, furnish them with great variety; and if we except the weaver, shoemaker, and taylor, they are totally unconnected with every other mechanic. The sly chicanery of the deluding merchant, they have nothing to do with; from this superficial, flimsy gaudry, they receive by this means no temptation. Their wool and flax, by the ingenuity and industry of their sober and virtuous dame*, furnishes old and young of the family with all the variety of dress wished for; and if the same mode of paying servants was to be adopted in other parts of Scotland, it might be a means, though not of reclaiming vice, at least of rescuing the virtuous from numberless temptations, and of promoting sobriety and industry amongst this numerous order of mankind.

Farm-Buildings.—A farmer's mains in the Merse district: these have undergone very essential improvements within these thirty years; but much less in the hilly district of the county; barns, and other farm-yard buildings, not being so immediately the object of pursuit on a pasture farm; but in the Merse, within these thirty years, the farm buildings have been greatly extended and improved. The farmer's house is generally two stories high, and wide in proportion, and covered with blue slate. The barns are large, and commonly made to accommodate two threshers at once. The stables and other offices are in proportion. One appendage has been lately added to the barn, for the accommodation of the threshing machine, drove by two or four horses, and is placed on the outside of the barn wall. To make the farm steading completely to answer all purposes, there are shades for feeding cattle, a dairy, a piggery, poultry-houses of all kinds; and above all, a water-pond in the farm-yard, constantly supplied with sweet water, is one of its greatest accommodations. The surrounding buildings, commonly form the whole into a rectangle, inclosed with walls and gates, where the other buildings are discontinued; the extent whereof, and the dimensions of the offices, are all in proportion to the size of the farm. There are many good farm steadings lately executed in the Merse, from which one will obtain more exact information, by inspecting for an hour, than from laboured descriptions of any length. Having already taken notice of those of Mr. FORDYCE, upon his estate of Ayton, I take the liberty again to mention them, as a model to be viewed by any gentleman who would

* Dame, is an appellation still retained among the lower classes, in the Merse, for a married wife; the mistress of a family.

wish

wish to have a proper idea of a complete court of farm-offices. In recommending those, however, I would not wish to be understood of them exclusively; the progressive state of the improvement of the county, must have added many things new and useful to this part of rural œconomy, since the time of those works being finished.

Inclosures.—It appears from what is above stated upon this subject, that inclosing upon a large scale began here upwards of fifty years ago, and has since that time been pushed with so much vigour, that the Merse district is now almost completely inclosed, and the fences reared and kept up with such neatness, as not to be surpassed in any part of Britain.

The scarcity of stone quarries in this part of the county, made it necessary from the beginning, to adopt in general the mode of inclosing with ditch and hedge. The white-thorn intermixed with a few crabb apples, have been for the most part used, and are for general use still the best of any plants hitherto thought of.

In laying out inclosures, it does not unfrequently happen, that the line of the intended ditch necessarily lies less or more over a thin red gravel moorish bottom, where even the heath itself cannot withstand the summer drought. To counteract this sterility, wherever such is suspected, the line of the ditch should be marked out; if for a single ditch, ten or twelve feet broad will be enough: if for a double one, the breadth ought to be twenty feet at least. These narrow ridges must be broke up with the plough a twelvemonth preceding the time of making the ditches; it ought to be four or six times ploughed, harrowed, broke, and rolled if necessary, during the course of the summer months, and in September give it the ordinary quantity of dung and lime, or other compost, if you have such as given upon a wheat fallow; give it the last ploughing with a gathering furrow: this small labour is abundantly recompensed by the immediate advantage obtained: putting the fences over these barren tracts in the same state of prosperity as those upon the better lands. The practice of ditching and hedging, are, in all their branches, so completely understood in this country, it would be worse than trifling to dwell any longer upon that subject.

Double-ditches, for outside fences, have been much used in this county, and highly approved of; the bank raised in the middle having a slight cocking of whins or brush-wood, becomes at once a fence. The two hedges, when properly trained, and kept free of sheep, are alone in five or six years, with the bank, a fence on both sides.

Division-ditches, or those made in the interior parts of the farm, for subdividing and reducing inclosures to the size wanted, are done to great advantage by a single five-foot ditch; and upon the backside of the ditch, a faced dyke of stone is raised, about 3 feet 10 inches in height; the coping raises it four inches more; this makes a cheap and immediate fence on both sides; blasted, or, when stones from the land answer this purpose very well, ten cart loads do one fall of six yards. Where stones are not to be got, they are content to employ in their place the turf or feal of old strong ley, if the fence pass through or near such; this is a good substitute, when built in the way peculiar to this country; the feal are cast thick, all in the form of the diamond of a pack of cards, and as thick as the length of the side; they are every one set upon edge, the long angles running into one another, and are set perfectly perpendicular; four rows complete the height wanted, and every row, as the dyke advances, is placed two inches within the row beneath. This kind of fence, if it chance to face the north or east exposure, will last

last a long time, seven years and upwards; but the south exposure is unfavourable. These kind of fences are much used. The name this last is known by, is a *tinker-fence*, and the operation is called tinkering. Some men here excel in making these fences. They are done at one penny per fall, for each feal; about three pence per rood of six yards. If neither turf or stone can be conveniently got, recourse is had to a cocking of brushwood, or railing; and some have even divided their fields by two five feet, or double-ditch. But this method, where land is valuable, should be avoided if possible. As for planting double or triple rows of thorns in the ditch bank, it is a method not to be recommended, except where the land is very rich and deep. In thin light moorish ground, the roots of a second row of thorns never reach the moisture necessary for giving this plant its full vigour; they soon grow sickly, slunted, and at last perish, giving the whole an unsightly appearance.

Those being the fences for the most part used, and most eligible for this country, we shall here give a state of the medium expence of each:

A five-foot single-ditch 8d. per fall, being three feet deep.
Ditto double 1s. 4d. with a bank.
Ditto with the back faced with stone, the earth cut out, and backed up with the coping four feet high, at 1s.
A six-foot ditch, single, three and an half feet deep, 10d. to 1s.
Ditto double, with a bank raised, 2s.
Tinkering, three and an half feet high, with a cop, per fall 4d.
Cocking, various, according to the method and distance of materials.

The kind of ditches backed up with stone, are both the cheapest and most durable. When well executed, they will stand long after the hedges are complete fences. Many of those built at Blanerne, more than thirty years since, are still standing. If the stones in this case are small, and not plenty, it is œconomical to lay stratum super-stratum of feal along with the stones. This, when well executed, will do more than bring the hedges to a fensible state, which is every thing to be wished for.

Size of Inclosures.—This must entirely depend upon the extent of the farm. On the large farm of Fishwick, containing fourteen hundred acres, where much live stock is kept, particularly sheep, which require a greater extent of range and free air in the summer months than black-cattle do, inclosures are from forty to seventy acres: upon such a farm, if other things were suitable, a field might extend to one hundred acres; but for black-cattle, horses, &c. from fifteen to thirty acres are a good size. Water is the main object to be studied, in laying out fields; shelter also, when this can be obtained, should by no means be overlooked; and in laying out ditches, great nicety is required in conducting them, so as to keep clear of being swept off with sudden torrents from the higher grounds; at the same time, giving them their full effect, to act as drains upon all the low and swampy grounds, which double purpose they never fail of answering, both as a fence and a drain. Care should always be taken, that in the course of their direction, they be kept constantly emptied to the bottom; if they are allowed to retain stagnant water, their usefulness in either of these intentions is soon at an end; In places where this is suspected, and the level is lost, an aperture strongly built of the best masonry, is to be left at every such place, made under the bank, and of a sufficient width to discharge at all times the superabundant water.

Farther: it must be remembered, that though in point of accommodation, all the preceding advantages had been obtained, there is still one other, which, if neglected, would be highly embarrassing, as it really is to many: I mean by this, easy and ready access to every inclosure separately by itself: driving cattle through a corn field to pasture, taking fat cattle through where lean or working cattle are pasturing.—The bare mention of these circumstances is enough to the judicious, without entering upon any enumeration of the evils which often attend this piece of neglect.—By so judiciously disposing of all the parts of a farm, it is rendered in the completest possible manner to accommodate the possessor, which, without this precaution, would still be very imperfect. The form of inclosures is of less importance than any of the preceding. In a country, however, such as the present, surrounded by lofty hills, and those not at a great distance, the bird's eye view, as it were, lays the whole extent before the eye at once, as on a map or bowling-green, though falsely. It must be acknowledged, that if in the distribution of these beautiful fields, less attention had been paid to the regularity of the geometrical figures, the square, or rectangle, might have given place, without the smallest detriment to agriculture—the quality of the soil, as to wet or dry, clay and light turnip land, these ought, if possible, to be avoided, and never be included within the same field; their management, when in a state of culture, being in direct opposition the one to the other. The advantage of having ready access to water, as well as to each part of the farm separately—if in obtaining useful accommodation for promoting the purposes of agriculture, the chief object in all these works, it would certainly appear, that there had been no sacrifice made in dispensing with the trite uniformity of straight lines and right angles, which here is an object of small importance.

Pruning Hedges—Should by no means be neglected, especially during the six or seven first years of their growth. This operation, when done with the pruning-hook, in place of the large scissars, is done with much more ease and expedition. To form the hedge in its early state, and give it all the advantages required as a fence, pruning at least once every year is necessary, in autumn; pruning multiplies branches, and so thickens the fence. In former times, less attention was paid to give the hedge its fullest effect in shape, than is now done in many places; the hedge ought to be left broad next the bottom, tapering gradually to a point at top. By this disposition of the branches, every part of the plant is made to undergo the same quantity of pruning, consequently every part must multiply in its number and thickness of the branches alike; by this means the fence must be equally thick from bottom to top. The reverse was the case in the former way of training: the use of the knife was chiefly upon the top; the branches of course were multiplied there; the bottom branches, the most useful part of the fence, always perish from the sap, being necessarily diverted to that part of the plant, the top, where its vigour was the most excited. It must also occur to every person, that the form here contended for, is in fact no other than an imitation of the same process observed by nature herself, in all trees, when left to themselves, and in a healthy state; the thorn also, all have the same tendency to a perpendicular direction, and to run tapering with a leading shoot, if not broke by wind or other accident, leaving always at the bottom part of the tree, the greatest number, strongest, and most flourishing branches, which in size and number taper gradually to a cone at the top; of which the present improved mode of training hedges is only an imitation.

Weeding

Weeding Hedges—is the only other work of moment we shall mention at present. A hedger has in this county, long been a distinct employment, and an apprenticeship served to learn this art. I shall here beg leave to mention its principal operations, which are ditching, and planting hedges, dressing which, includes weeding, pruning, tinkering, and some smaller operations done by their art. Their peculiar tools are, the garden-spade, a small hedging spade, the web, four inches broad by nine inches deep, going on with a hose; the hedge hoe with two teeth; this hoe, upon the one side, serves to cut the roots of grass, &c. in the straighter interstices betwixt the thorns; the two teeth on its other side, pull out all the loosened weeds. The small hoe is about three inches broad; the teeth about the same length; the shaft two feet, and is stuck on by a hose. Having so particularly described the hedger's implements, it is not necessary to shew their use. They generally weed hedges when young, twice; when grown up, once a year, is enough.

Hedges are reared, and kept in the best repair, when done at the mutual expence of the landlord and tenant; the landlord retaining the management, and settling with the tenant annually.

The annual expence of training, and keeping hedges in the best state of repair, is also done here, by piece work, at the rate of 4s. or 4s. 6d. for every 100 falls per annum, both cleaning and pruning included.

Roads and Bridges.—These public works have been of the greatest use in promoting the prosperity of the county of Berwick. The building of Coldstream bridge some years ago, and opening the west road to England, has produced a striking change upon the western part of the county. Coal and lime are now brought in carts to all parts of Lauderdale, and even to Tiviotdale, from Lothian.

Upon the eastern part of the county, since building the Pease bridge, the like access is opened to the lime works in East Lothian. At all seasons, by the goodness of these roads and bridges, there is ready access, free of danger, to markets, often near thirty miles: where the distance is so very great, they travel much in the night time, carrying to market, grain, the produce of the farm, and next day returning loaded with either coal or lime; neither of which, in the former state of the country, could have been attempted, except only when carried in bags upon horse-back.

The roads in the Merse, have always been a reproach to the county, and have very much retarded its improvement. The present proprietors, sensible of these disadvantages, have made an exertion, which it is hoped will in a short time bring about a thorough repair of the roads, and accelerate the progress of improvement beyond what has hitherto been known.

In the year 1792, an Act of Parliament was obtained, for repairing and widening all the most useful cross-roads in the county; and some of the most frequented of these are already put in complete repair—such as from Dunse, by Chirnside, to Eyemouth and Berwick; and also from Dunse, by Sunwick, to New-Waterford; and in the lower part of the county, the road from Banghouse-walls, by Eccles, and Swinton, to Upsettlington ford. The repair of others of the cross-roads is also advancing very fast.

In the lower parts of the county, as in Swinton and Whitsom parishes, &c. the distance and scarcity of materials, causes these works to proceed more slowly. The expence also is greatly enhanced, from 150l. to 263l. per mile; whereas, in the higher

parts of the county, from the easy access to materials, from 60l. to 130l. will finish one mile equally well*. The dimensions of the metal, also, upon these new-made roads, is noted to be twelve feet in breadth, ten inches on the edges, and twelve inches in the middle. The statute-labour also, is now wholly converted into money: 7s. 6d. for a horse, 3s. for each man, per annum. By this aid, and the money arising from the tolls, this desirable purpose will in a few years be attained.

Bridges.—That of Coldstream, and its consequent advantages upon the prosperity, and agriculture of the county, have already been mentioned.

Beaths, or *Pease Bridge*—as it is commonly called, lies over a vast chasm, in some parts more than 160 feet deep. Over this steep pass, a magnificent bridge, of four arches, was built in 1786. Its romantic situation, and stupendous height, afford matter of curiosity to travellers. But its utility for military and commercial purposes, betwixt South and North Britain, also for facilitating the improvement and agriculture of Berwickshire, are objects of the first importance, and now attained with ease†. Other useful works of the same kind, have also been lately done in the county. Besides rebuilding the two large bridges upon the Whitater, above mentioned, there was another bridge, very necessary for a free communication betwixt the towns of Dunse and Dunbar, across the same water, at Preston, built about the year 1770. All these useful works, the Pease bridge excepted, have been intirely completed by the subscriptions of the county.

Implements of Husbandry.—In addition to what is already mentioned above, when treating of the progress of husbandry, I am authorised to mention one circumstance respecting the plough now in general use: that attempts had been made to alter the form of the mould-board, previous to Mr. SMALL's ingenious improvements upon the plough, —he adjusted the curvature in the most perfect manner, to receive the furrow with the smallest possible degree of friction—he also has the sole merit of inventing and modelling the cast-metal mould-board:—the chain, if it possesses any merit, is also an improvement of his; harrows, rollers, winnowing machines, or fanners—on all these he improved very much, upon what had been formerly in use in the county. It would be an unnecessary waste of time here, minutely to describe these implements in their past and present improved form, being so well known to every farmer here, and by others might be acquired, to greater advantage, by ordering a set of such from this county, as a pattern for others.

Wheel carriages, especially the common two-horse cart, have been essentially improved upon. The axle, formerly fitted into the wheel at random, was here adjusted by the strictest rules of art: a machine was constructed, by which the axle is made to move in the nave with the least possible degree of friction. Iron axle-tree ends, for still lessening the quantity of friction, were also invented, and have since become general.

Friction wheels have, by sundry ingenious mechanics, been attempted, but hitherto without success. The other parts of the cart were also much improved, in their structure; and various alterations in the other apparatus received many useful improvements.

* For the greatest part of this information, respecting the roads, I am indebted to MR. JOHN BLACKATER, the present Surveyor of the roads there.

† This Bridge stands upon the N. E. angle of the county. Its height from the surface of the water to the top of the railing, is 123 feet; it is 300 feet in length, 15 feet in width, and is 200 feet in rise of the hill, above where the old bridge stood, only at a quarter of a mile east, towards the sea.

Small four-horse waggons were at this time introduced, and very much approved, for distant carriages, especially for leading lime from the Northumberland Draw-kills; these being managed by one man only.

Threshing machines have, though a late invention, already made great progress in the county:—there are already in this county about fourteen going, and, by intelligent farmers, they are found useful upon large farms. They require from two to six horses, according to the quantity of grain wanted; some are moved by a water-wheel, and one, I am informed, goes by wind.

It must be here observed, that the invention of a threshing machine, is not new in this county: Mr. CRAW, of Netherbyres, a very ingenious and learned gentleman, in this county, about fifty years ago, among other projects, his active mind embraced also this useful machine for abridging labour. To a good mechanical head, he possessed an uncommon degree of mathematical learning, and was in those times consulted upon all difficult matters. He fortunately also succeeded in the construction of this machine. His idea, however, went upon a different principle from that of the one in present use. In Mr. CRAW's machine, the effect was produced by impulse, a stroke in imitation of the flail; ten or more in succession, with incredible force gave their blows upon the sheaves, which beat out the grain most completely; but from the number of people to attend the operation, as also the crude state of a first discovery, the threshing-sticks and their then misconstructed tackling, went often amiss. The business was set aside till farther improvements were made; these suggested other schemes, and this useful discovery, in such able hands, was thereby lost.

It has been suggested by some dealers in grain, also by bakers, that the principle upon which the present machine acts, in the operation of threshing, by *switching*, in place of *beating* out the grain, is not so well adapted for separating it from the husk, the less ripened grains particularly; without its forcing along with the grain, of wheat and oats especially, the husks themselves, which no art is able afterwards fully to disengage. This objection is, perhaps, more ingenious or fanciful than real, therefore ought not to be admitted in its full latitude. The difference in point of value to the baker, of the same wheat threshed by the flail or machine, makes the odds, they say, of two shillings and sixpence per boll, worse done by the latter. There may be a little difference, but it must be allowed, the threshing machine is, upon the whole, one of the most useful improvements in modern husbandry implements.

Manures.—Lime, in respect of its extensive use in the county, is here intitled to the first place; though marl, amongst the early improvers, had the preference. Experience has since that time shewn, that its slow operation, together with the advance upon labour, has made the latter manure now a great deal less profitable than it formerly was. Four hundred cart loads, the least quantity that ought to be laid upon an acre, even of good marl, would cost the farmer, in digging, leading, and spreading, including horse hire, 3l. 10s. to 4l. per acre; but one acre can be substantially done with lime, in most parts of the Merse, at 2l. 15s.; and if nearer to the Tweed, about the one half of that money. But this expence is not the worst consideration in marling; its process in fertilizing the soil, for the first two years, is little more than discernible, whereas lime operates instantaneously. This circumstance, to the farmer, must at once determine the choice. Beside the loss of two years interest of money in advance, the farmer fairly computes a real loss of about one-tenth part of his profits, so far as the marling is

done during his lease, generally about nineteen years. The use of marl has therefore been almost wholly laid aside here for near twenty years. It must, however, be remembered, that marl, in respect to duration, has much the advantage of lime, its meliorating effects will, with proper management, continue to act more than the length of a nineteen years lease: it will even extend to thirty years.

Lime, although the general manure used over all the Merse, is not procured without great expence, both from its distance, often more that twenty miles, as above stated, before you can bring it upon your intended field, and the Tweed being often inaccessible, for want of a bridge somewhere between that of Coldstream and Berwick. This deficiency, and almost the only one now existing, has long been a check upon the agriculture of the eastern part of Berwickshire.

There is no lime or coal in this county, hitherto found. There is no lime nearer than four or five miles to the south of the Tweed, and some is brought much farther. The distance to some remote parts of the Merse district, is from ten to fifteen or twenty miles.

Marl.—The blue, or stratified kind, abounds upon the banks of the rivers here; on the Tweed, and on the Whitater in most places, from its junction with the former, as far up as Preston, sixteen miles; the Blackater, for some miles upon its banks, contains very good marl. And it is also found in other situations, and at some distance from the banks of the rivers. It was long in practice, as a manure, and with great success, both upon the deep strong lands, as well as the light turnip soil; and from its meliorating effects, must be of a rich quality. Marl, upon the banks of the Whitater, has, upon trial, been found to contain two-fifth parts of calcareous earth. Marl has been applied, with the best effect, upon summer fallows, most commonly upon dry outfield land, and is by the best farmers cropped as follow:—1st, oats; 2d, pease; 3d, wheat; 4th, barley; 5th, oats; then fallow:—all these good crops, and without dung, or any other manure. For this course of cropping, I have the authority of one of the best practical farmers in Berwickshire.

Farm-Yard Dung.—The management of dunghills, though one of the most important articles in rural œconomy, has not till very lately been strictly attended to. Careful spreading and mixing equally the animal and vegetable parts of the mass, keeping off cattle from treading upon it, and preventing it from standing amongst water; these are the proper means for promoting an equal degree of fermentation over the whole mass. But the careful farmer, in order to bring this dunghill to its greatest value, will, at the beginning of the season, when the dung-steading is empty, at one end form a bench, in breadth proportioned to his stock, and carry it up as far as easily accessible; then begin another close by the first, and so proceeding regularly over the whole, during the course of the winter season. If the fermentation in the first benches is likely to have gone through all its different stages, which is readily known by the gradual decline, and at last, final departure of the heat, which more or less attends every fermentation, it may, if not observed, go to a state of putrefaction, thereby greatly lessening its value as a manure. To prevent this loss, lead out that part for use; if too early, put it in a dunghill on the field; if none of these can be done, turn over the part of the dunghill where the process of fermentation is already completed; by a new arrangement of parts, it again will ferment afresh, till the season come on for using it.

The

The perfection to which the dunghill is brought by this management, the ease in filling, and other advantages attending it, will abundantly more than compensate any seeming additional trouble.

Shell-Marl—Has been found in some places, and used in the county, but is not in plenty*. There has been a late discovery made by HUGH SCOTT, of Harden, Esq. upon his estate of Merton, at Whilaig-bog, on the west verge of the county of Berwick, which has a most promising appearance. The bog is at present swarded over with a coarse kind of grass. By boring and digging pits in different places, it is found to contain, at an average, about seven feet of a rich shell-marl, covered by five or six feet of peat-moss, or turf. This field, to the extent of about eighty acres, appears in a situation equally remote from the lime works of either Lothian or Northumberland, at least twenty miles. In so uncultivated a part of the county, this must be considered as a discovery of very great importance, not only as a rich manure ready at hand, but its turf will furnish an inexhaustible source of fuel for the poorer inhabitants of this tract of the country.

Markets and Fairs.—Though in some other of the country villages, there are a sort of weekly market, there are none for the general accommodation of the country, deserving that name, except at Dunse, which has a regular weekly market, held every Wednesday, at which a great concourse of country people generally attend, both for the dispatch of business, as well as to provide themselves with every accommodation of life.

Fairs.—The three great annual fairs of Dunse, are among the best in the south of Scotland: at least 20,000 l. sterling are received for cattle and horses at these fairs, bought chiefly by English dealers; but more especially at the harvest fair, on the 26th of August, when the greatest shew of fine cattle to be seen any where, are sold here. One English dealer will sometimes purchase to the amount of six or seven thousand pounds. Four years ago, 700 beautiful cattle were the purchase of one person only.

Markets.—Though these are distant, the goodness of the roads make it an easy matter now to transport corn, meal, wool, live-stock, or whatever is the produce of the farm. Edinburgh, Dalkieth, and Musselburgh, are sure markets for all sorts of fat cattle, and Edinburgh Hallow fair also. Sheep being now in this county all of the large kind, find a readier market at Morpeth than in the Lothians; as also wool is generally sold to the English jobbers, and merchants of Leeds, and other manufacturing towns in the south.

Live-Stock.—Till within the last twenty years, little attention was paid to this important branch of husbandry. Since that time, very striking improvements have been made in horses, and neat cattle, but particularly in the breed of sheep, and meliorating the staple of the wool.

Black-Cattle.—The cattle bred in this district of Berwickshire, have always been numerous, and of as large a size as any bred in Scotland. Many people of skill are of opinion, that the breed may still be improved. Accordingly, some public spirited

* Shell-marl, both at Bighame and Kimmerghame, have been long known, and used as a manure, and is so still.

gentlemen

gentlemen and farmers, have of late purchased, at very high prices, some very fine bulls and cows, from the best breeders in England. Though they have not yet become general, the bulls are let out in the country at two guineas. It may be observed, that it is not the very large, heaviest cattle, that the farmers here wish to breed, but the smaller, well shaped, kindly feeding sort, that will raise the most money from any given quantity of grass, turnip, or other food, in a given time. The steers of the best kind of this breed, when three years old, and fat, will weigh from sixty to seventy-five stone, 14lb. per stone, and, if kept to a proper age, will, when five years old, weigh from 85 to 110 stone.

Milk cows here, give from sixteen to twenty-four English quarts of milk in the day; some may give a great deal more, but I speak here of the general average. Cows, when properly fatted, weigh from 50 to 80 stone*.

Sheep—On all the best farms throughout the low parts of the county, are of that kind commonly known by the name of the new Leicestershire breed, which were first introduced into that county by Mr. BAKEWELL, and have been since greatly improved by the Messrs. CULLEYS, and other eminent breeders both in this county and Northumberland, and are found, in point of profit, far to exceed any other kind of sheep in this country. The peculiar marks of this breed are, getting sooner, and more easily fat, bearing a more valuable fleece, and enriching the land upon which they are fed.

There are two different ages at which they are sold; the first, when they are about eighteen months old, after the first fleece, when they are called dinmots, at which time they usually sell from 24s. to 34s. each. The second time, is after their second fleece is taken off, when they are called wedders of the first head, and are twenty-eight months old, when they sell from 32s. to 38s. each. A wedder of this age, will weigh from 20 to 28lb. per quarter; and the ewe, when fattened, from 19 to 26lb. Three fleeces and a half commonly make a stone, which sells from 15s. to 18s.; or a single fleece is generally worth about 4s. 6d. to 5s. and weighs from 7 to 8lb. The ewes are kept for breeders, and are sold, after having three lambs, from 24s. to 34s. each. These sheep are bought by dealers, and driven to Morpeth market, where they are again sold, and killed at Newcastle, Shields, and Sunderland, for the use of the shipping, colliers, &c. The wool is sold to agents from Leeds, and other manufacturing towns in Yorkshire. Some of it goes to Aberdeen, and a small quantity to Edinburgh and Stirling. The best pastures are appropriated to feeding sheep in summer; and for about five months in winter, are mostly fed upon turnips, of which very large quantities are raised here. An acre of good pasture, value a guinea, will fatten three sheep; and the average expence of turnip, is three-pence per week for each, when fed to the highest extent, which, for the winter five months, is five shillings for each sheep. It is computed that two ewes rear three lambs. High prices are paid for the hire of rams

* In the Merse, the average state of the price of the provisions, at the present time, is nearly as follows:

	£.	s.	d.		£.	s.	d.
Beef and mutton, per lb. - -	0	0	3½	A couple of ducks - -	0	1	3
Veal, ditto - -	0	0	4½	A goose - - - -	0	2	0
Lamb, 4d to 6d. per lb.				Turkey - - - -	0	2	6
Pork, per lb. - - -	0	0	3½	Butter, per lb. - - -	0	0	8
A couple of fowls - -	0	1	6	English cheese, per lb. - -	0	0	4

N. B. The pound contains 16 ounces; the stone 14 lb.

of

of a good breed: from ten to thirty guineas per season is common. Some have paid double, or more, for the best bred rams. It is a certain fact, that no animal follows the properties of the male so much as the sheep—each ram will impregnate from five to six score of ewes. The highest breed also bears the finest wool, though not always in the greatest quantity. This breed of sheep are uncommon good feeders, but often do not carry so much tallow, in proportion to their weight, as some other kinds do. The farmers here pay uncommon attention to the improvement of their breed of sheep, and find them more and more profitable, the oftener they are crossed by the best breeds.

Horses.—In treating of live-stock, this noble animal, in respect of his superior excellence, and usefulness to man, certainly demanded our first attention, though in the present arrangement, he has been undesignedly misplaced; but he does not thereby suffer any degradation.

The gentlemen and farmers in this county, have long paid attention to meliorating the breed of horses; they have, however, within these ten or twelve years, since the demand and prices of horses rose to such a pitch, pushed their ardour for breeding in every part of the county, and great numbers of half bred horses are sold annually to dealers, and at high prices; four and five year olds, often sell from thirty to forty guineas; many of them are carried to London. Horses of form and size, sixteen hands and upwards, are sold both for the chariot and the field. The farmers replace those with young horses, bought in from the west country, Glasgow, Lanark, &c. which answer their purpose equally well, and a saving of ten or fifteen pounds is thereby obtained. Upon account of so many distant carriages, the farmers here use none of the heavy, dull, lumpish horses; those of fifteen to sixteen hands, handsome, and of a good bone, answer their purpose much better; the price of such is now much advanced; those formerly 12 to 16l. are now purchased from 20 to 26l.

The swine and goat, two other species of domesticated quadrupeds, being no object of attention for the farmer to rear upon a large scale, it becomes unnecessary to dwell upon either of them, or the different species of domesticated fowls.

Poultry—The prestations respecting the payment of dozens of fowls, being, in the more recent leases, done away, the modern farmer, as far as his wife will permit, has very properly banished all these from his premises, especially where the corn husbandry is practised.

Tillage.—This is wholly performed here by the plough. The arable lands are almost all inclosed in this district of the county; the inclosures made larger or less in size; according to the fancy or taste of the proprietor, and not unfrequently, by the advice and interference of the tenant.

Land which is to be reclaimed from its natural state, and turned into cultivation, is, after inclosing, to be drained, and, where necessary, cleared of stones, whins, furz, broom, &c.; and as it not unfrequently falls out to be the case, there are interspersed in the same field, detached patches of the old crooked high ridges, these must be reduced, and the moors and other uncultivated parts all subjected to the plough, thereby bringing the field to some degree of uniformity over the whole, which, before the commencement of the wet season, is struck into ridges of eighteen feet broad, running in the direction which is the most adapted for carrying off the surface water. It was formerly very much in practice here, in straighting ridges, to run them off into nine or ten feet in

in breadth only. But farther experience has shewn this last to be an error, and if this were done on heavy or wettish lands, it would be attended with considerable loss. The mode of tillage was specious and plausible, but does not answer in the execution. In making the ridges, crowns, and furrows, alternately, the plough, it is true, has always an open furrow to enter upon, and the danger of baulking in the feering, is hereby avoided. In light, dry, gravelly soils, this practice may still be continued with safety; but on flat, or wettish lands, the very reverse: here the junction of the two furrows that now form the crown of the new ridge, is only in a few places so raised, as to cause the water descend into the furrows, it therefore stagnates over the greatest part of the field in wet weather, and in the winter season, even to the crowns of the ridges, thereby, so far as it goes, ensuring certain sterility for at least the ensuing season. The detriment, from the wet state of the land in the seed time, very often occasions a delay of two or three weeks in sowing, which, even upon the sound part of the field, must cause a defalcation. In respect of sowing, the eighteen feet ridge can be managed with more neatness by two casts, than a nine feet ridge can with one cast. The advantage also of harrowing three horses in a head, or rolling, is rather in favour of the broad ridge, and in reaping, it completely answers three reapers. To plough in those ridges, greater attention is required, in order to preserve every ridge in its proper position and direction. This is done effectually, by casting, cleaving, gathering; and the end, both beauty and usefulness, is easily attained.

A pair of horses, without any driver, are in general used throughout this county, with SMALL's plough*; they do an acre in a day; their furrow about seven inches deep.

Drains.—Draining has been greatly practised in this county, and is still necessary. The drains used here are various, according to the intention. Covered drains, if filled with stones from off the field itself, where that can be done, answer all purposes much better than any other. The cut is made about three feet deep; twenty-six inches at top, and nine or ten inches at bottom; in making, it will generally cost about fourpence per fall. Wood for filling these drains, where stones cannot be got, has been used successfully: branches pruned, and laid in the form of long rods, all parallel to each other, and about eighteen inches in thickness; but the drain is in this case made much narrower, not more than four inches wide at bottom, and at least three feet in depth.

In covered drains, of whatever description, it is necessary, previous to felling in the earth above the stones, wood, &c. carefully to cover these over with heath, broom, old thatch, or turf, turning the sward down; any of these will do; the first is the best; that all chinks and openings may be shut up, and no earth may enter the drain.

Another construction in wood is also made, by using the Scots fir; where plenty, it is sawed into billets, which, after being split, are set up on end; these are lintled over with other billets, a top forming a hollow drain, about a foot, or fifteen inches high; but the former, in point of duration, are preferable.

In all the different methods of draining, it must always be kept in view, to construct the drain in such a gentle declivity, as that its run may be almost imperceptible; but

* For the use of this name, all along, I am authorised by Lord KAIMES. See Husb.

the

the motion, if possible, to be uniform, and in no place to stagnate from beginning to end, otherwise it is not of the smallest use as a drain.

Sometimes drains, upon account of sudden torrents of water, are permitted to be constantly open: the last are formed by the spade; or in flat meadows, where great depth is not required, are done at much less expence, by repeated cleavings with the plough; by which it is formed into a sloping bank on both sides, grass or corn growing to the bottom, which is about thirty inches below the surface. Many other modes of draining might be described, but these are the drains of most common use in the county. The tops of heath, straw, or even strong feal or sod, have been used for want of better materials; the first is the best. It is necessary in every case, to keep the covering stuff laid above the drain, so low, that the plough may freely pass without interfering. These drains, if properly executed, will never stop. The first construction of the wooden ones mentioned above, I know them running more than thirty years.

Rotation of Crops.—In this branch of agriculture, farmers in all ages appear to have been sensible of the necessity of a rotation of crops, in order to restore to the soil its lost fertility. This practice, among the Roman husbandmen, in VIRGIL's time, seems to have been well known. And in the days of COLUMELLA and PLINY, who lived near a century after him, the alternation of crops regularly succeeding one another, with intervals of rest, or fallowing, seems to have attained its highest perfection*.

Even in the most barbarous system of management, in our own country, where five or six crops of oats running are taken, after a rest of six or seven years, although it is to be hoped they are now but few, who continue to practice such a disgraceful system of rotation, they nevertheless see the necessity of what is called resting, in their sense of the word.

Although, in the modern theory of vegetation, that of Mr. TULL has been long laid aside, the art of improved agriculture is however indebted to this singular man for one of its greatest attainments, ploughing drilled crops, or horse-hoeing. Since the time of this practice being introduced in this country, we must date a new æra in the practice of Scotch husbandry. In all this county, for more than thirty years, a green crop, drilled in rotation, is generally taken in place of a clean fallow, especially upon all the light turnip soils. On the heavy clay lands, a clean fallow is still practised for wheat, and is sometimes necessary. But wheat upon these lands, is also often sown after good crops of pease, and especially drilled beans.

In respect to a regular rotation of crops, the course of the weather may sometimes frustrate the intention. Independent of this, amongst the most judicious farmers, there is here no invariable uniform system in practice.

It may not, however, before quitting this subject, be improper to state here, one or two examples, as practised by some of the most eminent husbandmen in this district.

For a clay soil:

1st. Fallow with dung,
2d. Wheat,
3d. Pease, or drilled beans,
4th. Barley,
5th. Clover, hay, and may be surrendered to pasture.
6th. Oats, &c.

* Dick. Ag. of the Rom. vol. 1. p. 229.

Where this course can be effected, there is none that can yield more profit to the farmer, or benefit to his farm, upon such a soil.

If in the third year above, the soil is not too strong, and the season answerable, turnips may be a substitute in place of the pease, or part of both.

For a loam, also a dry turnip-land:

1st. Turnips to be eat of,
2d. Barley,
3d. Hay,
4th. Oats,
5th. Turnips, or pease, red clover, with a small quantity of rye-grass.

Some here, to whose opinion very great deference is due, practice an alternation in the above course, making it run thus:

1st. Turnips,
2d. Oats,
3d. Clover-hay,
4th. Barley, after two furrows, or oats again,
5th. Turnips.

That there is in nature, a foundation for varying the species of grain in sowing, as well as the seed sown, seem both to be corroborated in the experience of the most judicious observers. We shall state one other example of rotation, upon an exhausted outfield farm, without any possibility of procuring dung upon the first outset.

The following has been successfully practised:

1st. Clean fallow, with lime,
2d. Oats,
3d. Pease, beans, or turnips with dung,
4th. Barley,
5th. Hay, surrendered to pasture for six years.

To the preceding examples, the best practices in use in the most improved parts of the county, are reducible. We therefore shall subject the above observations to the more expert and judicious farmer, and hasten to put an end to this long paper.

Culture of the different Crops.—Wheat—It may be observed, has long been cultivated with success in this district of the county, and to which it is very peculiarly adapted. They sow upon their richer and best cultivated lands the *White Kent*. It is rather a delicate plant, but in favourable seasons, is very productive, and the grain is the most beautiful of any; its price at market is in proportion high.

Cleveland Wheat, is more prolific, and will flourish in a soil less generous. The grain is rather longish bodied, and with a reddish cast; it is not quite so marketable as the preceding kind.

The Red Kent Wheat—This, upon the newly cultivated lands, especially those of an open texture, and inclining to moorish, was supposed the best adapted of any then known, for rising in the scale of profit above either oats or rye. It is indeed shorter in the head than the Cleveland, but has a full round body, and much better adapted to undergo the severities of a high climate;—wind only is its greatest adversary, it being very apt to be shaken in the last stages of ripening; it should therefore be carefully observed

served during that period. Other varieties of this useful grain have been introduced with success. Those, we refer to the discussion of the present practitioners in the rural affairs of the county.

Wheat is generally sown here from the 20th of September to the latter end of October.—Some is sown in March; but this season is less advisable: a good crop of either oats or barley frequently pay better, and do less prejudice to the ground. A good clean summer fallow is the best preparation for a crop of wheat; some wheat is also sown here after a crop of pease. Some here, steep, or pickle their seed wheat; others do not practice this. If there is any good attending this practice, it is, preventing for a time, birds from picking up the grain, and its furnishing an opportunity for effectually separating the weak or deceased seeds from those which are sound. Renewing the seed, by a change every three or four years, from London, or other parts, generally is a very material improvement in the culture of all kinds of grain; but in none so much as wheat. It is always sown broadcast, about two and an half or three bushels of seed to the acre. Ten bolls is a good crop. It is all reaped by the sickle. Wheat harvest, in general, begins about the last week in August. Of wheat, there is more exported from this than from any other county in Scotland*.

Barley—There are two kinds in common use among the farmers in this county.—The common, *two rowed barley*, and *big, or four rowed barley*. Of the first there are many varieties, and of the second also a few—those we shall omit here. The first, or some of its varieties, is cultivated all over the Merse. On the dry sound lands, it generally succeeds the turnip crop, and is, after one furrow, sown from the 10th of April to the first week in May, from ten pecks to three firlots to an acre. In fine land, much less seed is required. Barley is reaped about the end of August, to the middle of September. Barley is also sown upon a winter fallow after pease; also after a crop of wheat. In both cases, the land is thrice ploughed—soon after harvest, in April, and seed furrowed the first of May.

In high grounds, and those lately reclaimed from moors, it is found that *big*, or the four-row barley, is much better adapted to these situations than the former kind. The price indeed falls about two shillings and sixpence lower in the boll; but this loss is abundantly made up both in the quantity of produce and the time of ripening, being about three weeks earlier than the common barley, by which the bad effects of the early autumnal frosts are avoided, which often prove fatal to the latter.

Oats.—The common white oat, or *avena sativa* of LINNÆUS, is an annual plant, which, in its wild state, was found by Commodore ANSON growing in the island of Juan Fernandez, in the South Sea†. The white oat is thought to have been brought into Scotland, and first made known in cultivation, by BLITH, or some other of CROMWELL's Officers, who settled here in the time of the Commonwealth. For

* The different kinds of grain, as currently sold in the different markets, may, by an average, be stated nearly as under, by the Berwickshire boll, of four firlots, which is one twenty-fourth larger than the Linlithgow measure, or one-half peck in the boll:

Wheat, per boll	-	£. 1	5	to £. 1	13
Barley, ditto	- -	0	15	to 0	18
Oats, ditto	- -	0	12	to 0	15
Peas, ditto	- -	0	0	1	4

† Linn. Spe. pl. tom. 1. p. 118.

previous to that period, one hundred and fifty years ago, our husbandry knew only the small bearded grey striped oat; the culture of which, in some few places in the north, is still practised upon their moorish grounds, and is now commonly known by the name of black oats. The increase is very poor, and when rendered into meal, is hardly half for corn. But the white oats are much cultivated in this county, and farmers have of late paid great attention to the different varieties of seed.

1st, Blainslie.—These have been long known, and cultivated here; they are both very prolific, and being very thin in the husk, they meal well; though late of ripening, they prosper better than any other kind, upon high cold clay, or wettish land. But on the contrary, when these are sown upon a more favourable soil, they yield a much greater increase, ripen earlier, and are always free from any mixture of the small grey oat; they are therefore still a variety worth the encouraging.

2d, The Halkerton, or Angus oats, are now the principal kind sown upon all the rich lands in the Merse. They produce a weighty crop, and in time of ripening, are two weeks earlier than the former, being a medium between the Blainslie.

3d, The Red Oats.—These have for several years, and do still, stand very high in the public estimation, being two weeks earlier than any of the former. They have been considered as a great acquisition, not only to the Lammermoor part of this county, but in all the hilly district of Northumberland and Roxburgh shires, where they are universally sown; and unless they are let stand till too ripe, they are not so apt to shake or shed their seeds, in those high grounds, as many other of the varieties are. They also meal well, though the straw is not reckoned so palatable for feeding as the Blainslie is.

Oats are sown from the first week of March till the middle, or first week of April, if necessary, beginning with Blainslie; 2d, the Halkerton, or Angus oats; and about the first of April, 3dly, red oats may be sown. Oats of all kinds ought to be sown thicker proportionally than any other grain; these, when sown thin, and upon rich lands, are so apt to tiller, and run into after-shoots, that when the crop is thin sown, it is often reduced to small value, or lost. A boll of seed for the Scotch acre, is about seed enough, but not less. Some other varieties might be mentioned, but are here unnecessary.

Farther: the oats, in the scale of agricultural improvement, are the only grain hitherto known, whereupon the farmer can with confidence trust to repay his labour in the early stage of cultivation.

Oats are, therefore, with perfect success, sown upon all new broke up lands, whether wet or dry, clay or gravel; there is no soil comes amiss to this plant. Old leys, pasture, and grass lands, are sown after one furrow. It is also found to be the hardiest of all grain, and will flourish at the height of five or six hundred feet above the sea level, and there produce good crops, if not too much exposed to high winds. It is found, however, by too fatal experience, that this valuable plant is, above all others, hitherto known to be the most pernicious to the interests of both the farmer and proprietor: if an undue repetition of crops is persisted in, particularly in the use of exciting manures, the plant itself, prone above all others to fertility, deceives the too avaricious farmer, and by an excess of this principle, it will continue productive till every other plant, even grass itself, will cease to vegetate where it grew.

In the present leases, therefore, cropping with oats in this imprudent manner, is strictly and wisely guarded against.

It

It only now occurs to be mentioned here, that if we judge with propriety of the ruinous effects of a succession of white crops, it will appear from what is above stated, respecting oats, that if these were to be abstracted from the course, barley and wheat might be permitted to go on as long as the farmer can find them profitable. The neglect of manure, and inattention to tillage and good culture, will soon render these two, when alone, an improper object for cultivation, in the way that he would wish to go on. But with oats, this is precisely the reverse; for with much less cultivation, they will yield a greater return than any other kind of grain.

Oats being sown from the end of February, they are cut from the latter end of August to about the middle or latter end of September, when the harvest in this county (the Merse), is frequently finished. Harvest is reckoned early in this county, when it begins before the 20th of August.

Beans and Pease.—These are much cultivated in all the low parts of the county, and generally sown together broadcast, and as a meliorating crop, are with great propriety, one in every good course upon clay lands. These are often sown after a crop of wheat, and give a good return. Three firlots, or fourteen pecks to a boll of seed, is sown upon an acre. The produce is various; seven bolls per acre may be reckoned a good crop. Drilled beans are practised in some places, but much seldomer than they ought. By this mode of culture, a much greater crop is gained, and the land, if properly horse-hoed, is hereby in good preparation for either a crop of barley, or grass-seeds, or wheat. These being cold seed, ought to be sown as early in February as the season will permit, and not later than the 10th of March, otherwise they seldom ripen, in which case both straw and grain become the least profitable of all crops. Upon light dry lands, the Hastings, or Peeble's pease, are sometimes sown after oats, to the end of April; and if the land is in tolerable order, this pea, being much more prolific than the common sort, will yield a great increase, often ten bolls on an acre, after one boll sowing, and may be fallowed by a crop of turnips with success. The straw also of this last, is of far greater value than the former kind.

Tares—Are sown in some places, and found profitable as a green food for horses.—They are sown both in autumn and early in the spring, viz. September and February. They prosper only in clean rich land, and are, if sown in any quantity, fallowed by a crop of wheat.

Rye.—There is hardly any sown in this county, so far as I know.

Potatoes.—All the varieties are universally cultivated here, though not as a crop, only for family use and conveniency. The Surinam potatoe, erroneously called yams, is cultivated by many farmers, as a food both for horses and neat cattle. Milch cows are fed with them as well as fatting cattle. Upon dry light land, these yield a prodigious increase. They are planted in April, in drills, three feet distance, and long dung laid in drills; when two or three times horse-hoed, this makes an excellent preparation for a crop of barley and grass seeds.

Turnips—Ever since the year 1750, have been cultivated here upon a large scale, and well managed; but it was not till near twenty years after that period, that they became a general crop throughout the county; and in the scale of improvement, have promoted agriculture more than any one plant ever introduced to the fields. They are both

both carted off the land for neat cattle feeding in the shades, or where the land requires it, are eat off by sheep, which are either inclosed by flakes, or netted in all day. Turnips are sown upon all new broke up lands, those especially new reclaimed from moor, and hilly districts; but only where the land is light and dry. They are generally sown in drills two feet and a half asunder. The land having been previously limed, and the drills dunged, becomes an excellent preparative for grass-seeds sown along with the red oat next spring. This has made a very rapid and substantial improvement in this county.

Swedish Turnip, or Ruta Baga.—Though this plant has been known in the country for some years, it has not yet met with that encouragement to which it is entitled. Its culture is perhaps less understood than that of the turnip, or the trials hitherto made, have either been too few, or injudiciously executed..

The seeds should be sown in a nursery bed in the garden, about the middle, or latter end of April. If sown any sooner, it is sure to run into seed, and is good for nothing: or it may be sown in the field, either in drills or broadcast, the same as turnips, and after the same dressing and management. In the field, the seeds are to be sown about the latter end of May, or beginning of June, not sooner, for the reason above*.

Though this plant will thrive upon the light turnip soils, it will however turn to much better account, upon the more loamy and deeper lands, if not too wet. Those from the seed bed, will be fit to be transplanted about the middle or latter end of June; the ridges having been previously prepared at two feet and a half distance, and the plants set in the rows on the top of the ridge, at one foot asunder, plant from plant. These also being duly horse and hand hoed, throughout the summer months, will, in point of weight, equal any middling crop of turnips, with this superior advantage, that these will continue to give abundance of green food during the whole of the month of May, if they are not too much eat down in the early part of the season.

Cabbage—Has also been planted upon a large scale here, and is found profitable, and may be cultivated upon the same kind of soil and cultivation as in the transplanted ruta baga.

Coleworts—Also, have been, with propriety and success, introduced into the fields here, as a green food for cattle. The kind called Kilmaurs, or Scotch kail, are the properest for this purpose. They are hardy, and thrive luxuriantly. If they are not planted too early in the season, they will continue in verdure till June, the latter end of that month being the most proper for planting them. Cabbages, when properly managed, will arrive at very near double the weight upon a given space. But as these turn into cabbage, or blanch in the heart, they are rendered unfit for resisting even a moderate winter; therefore ought to be consumed by Christmas. The kail, on the contrary, remaining always open, is so hardy as to resist our severest winters, and answer well for a spring seed. Ten or twelve ton is very common on an English acre.

Aberdeen red cabbages do very well, and answer the same intention, if they are not planted till July: they also remain always open, and both stand the winter well, and in respect of weight, exceed the last by four or five ton on an acre.

Flax—Grows very well in all the low parts of this county; but except a little that is sown for servants, and family use, it is, for many reasons, ineligible here.

* This plant being so prone to spoil, and run into seed, as all the genus of Brassica are, I have found it much safer in practice, never to sow the seeds of this plant, till the second year after saving

Artificial

Artificial Grasses.—Rye-grass, clover, both red and white, yellow also, or what in England is called trefoil, having been so long known, and universally approved here, it would be wasting time any further to mention them. One circumstance only occurs, respecting the culture of rye-grass, which is one of the most valuable of all the gramineous tribe: in pasture, it is the most early of any; in hay-fields, it is often the weightiest part of the crop, and even by itself, is approved of, as the wholsomest and most nourishing of any dry fodder, when the hay is properly managed.

The plant of common rye-grass, is the *lolium perenne* of LINNÆUS. An opinion has for some time been entertained by many farmers, that there are kept in the seed shops, two different kinds of this plant: one annual, another perennial, they having observed large patches, and sometimes whole fields, where the plants have the first year perished, after producing their seeds. The observation is just, but is, we humbly suppose, not owing to any difference in variety. Rye-grass, like our rye, barley, wheat, &c. is prone to form itself into a stem, and perfect its seeds the same as other annual plants, which, when completed, do most certainly perish. When in pasture, this may be prevented, sometimes for several years, in this plant, by its being constantly cropped and bruised early in the spring, or growing season, thereby forcing it, like other grasses, to tiller, or push out fresh suckers annually. In hay-fields, the case is different; there it is under no constraint, and from the same cause as other grain, the plant often perishes. This is occasioned upon light dry soils, also in droughty seasons; either the burnt up parts of the field, or sometimes the whole, will perish; or, 2dly, if hay seed is wanted, and the mowing protracted to an undue length of time, and perhaps is cut in very dry weather. This also is frequently the case. This misfortune might almost wholly be prevented, if the following hints be attended to. When in pasture, the rye-grass field ought, in its earliest stage, before it begins to spindle, to be kept constantly eat down, or mowed. And in the hay-field, the mowing ought not by any means to be delayed, waiting for the maturity of the red clover, which is too often the case. Rye-grass must be cut at the time, or rather immediately before, it begins to flower. Thus, in either case, there will hardly any of the plants die. That part of the field which remains for seed, runs a much greater risk. The error here is occasioned by letting the seed-field remain too long in a growing state, whereby the one half of the seed is often lost in working it, and the rye-grass effectually destroyed into the bargain. The experiment, though undesigned, has been often too fatally repeated. One part of a field, for seed, was cut in proper time; an incidental circumstance made it necessary to delay the remainder for ten days: the seed was lost, by its being too ripe. The rye-grass last cut, also perished, while the part first cut of the field, maintained its verdure. This appears clearly to put an end to the question, whether there exists two different species of the *lolium perenne*?

We shall only add one other material circumstance to be observed in the cultivation of this plant: its seed being sown too thick, is often the reason of its perishing the first year, more than any other. Three, or even four bushels of seed, is often sown on an acre. If the seeds are clean, genuine rye-grass, nothing more is wanted to ensure the certain destruction of the plant, for the same reason as before mentioned. The thicker you crowd those culmniferous plants upon one another, the more effectually is the whole effort of the plant directed to one single end, viz. the production of a single stalk, and its seeds only. There cannot be the smallest effort made for its future duration

tion or increase, by offsets, which all this tribe of plants, even the oat itself, when left at liberty, always will do; consequently they both produce their seeds, and both must perish. Of the oats, the seeds and straw only were wanted, therefore in the culture, are to be crowded thick upon one another. Rye-grass, on the contrary, if wanted as a permanent and perennial plant for pasture, must not be over-crowded upon the soil. By giving it scope to tiller, and send out offsets, by mowing early when in hay; and when for seed, to be cut before the bloom is quite gone off the upper part of the spike; for by that time, all the most valuable part of the seeds on the under part of the spike, are fully ripe. The hay also, from this mode of management, is well known to be of a very superior quality to those withered, sapless, brittle stalks, commonly sold under the name of rye-grass hay. When in pasture, it should be constantly eat down. And, finally, in sowing the seeds, one bushel of clean, genuine seed to an English acre, if the land is in a proper state of preparation, will be quite sufficient. I never saw a better crop of hay, than once, by way of experiment, where the one half only of that quantity was used, and the field managed as above stated.

POSTSCRIPT

POSTSCRIPT.

AFTER so minute an investigation as is already given, there appears to be only a few particulars more which require to be briefly added to this account.

Flooding, or watering of land, as an improvement in agriculture, is not in practice here; and except in a few instances, paring and burning is seldom made use of.

Diseases.—The health of the inhabitants of the Merse district, in the course of the last thirty years, has been much better than formerly. Rheumatism, fevers, and the ague in the spring season, were general: its rage is now abated; also the other diseases, which are justly ascribed to the draining, and more improved state of the country.

Commons.—There are only two, which are remarkable, in the county: that of Coldinghame, containing about six thousand acres, has been divided amongst the neighbouring proprietors, and, from attempts made in preceding years upon its outskirts, by farmers, there were sanguine hopes entertained of its future fertility. However, the event has by no means justified this expectation. Trials have now been made by different proprietors, both in cultivating with the plough, and inclosing and planting.—Those who have waited to see the issue of these schemes, have perhaps acted a more prudent part.

This is by no means the case with the Dunse Common, commonly called the Stony Moor: it consisted of upwards of 300 acres of the worst land, and the most expensive to improve into corn-fields, that I suppose was ever done in that country. However expensive the work has been, that part of it falling to the share of the feuers in Dunse, is now all completely inclosed with stone walls, built from the rocks blasted from the soil itself. The several small inclosures are neatly dressed, the whole appearing like so many gardens, where in former times a few half-starved cattle, and old wore out horses, were sent to end their days.

Manufactories.—The two paper-mills, at Ayton and Broom-house, as also a bleaching field at each of these places, and an extensive brewery and distillery at Dunse, are the most remarkable of the public works in the county. The paper-mill at Ayton employs about seventy or eighty people, and the other perhaps about the same number.

Fisheries.—In addition to the white and herring fisheries, which are along all the sea-coast of the county, already mentioned, the Tweed also abounds with salmon, and all the other kinds of fishes peculiar to Scotland. The salmon run up far beyond the bounds of this county, to the west, but these are of small value. Lower down, near the mouth of the river, the salmon fishery is of prodigious value, and employs many vessels, both foreign and coasting trade. Even at six or seven miles above Berwick, the salmon fishing is very considerable. In the parish of Hutton only, ten boats are employed, in the fishing season, upon the north side of the river. In the months of January and February, the salmon are of the greatest value: one salmon taken here in January 1791, though under twenty-eight pound weight, was sold at Berwick, for the London market, at 3l. 2d. The rent of the fishing waters here, is upwards of 200l.

per annum, and about twelve men employed. The tide flows up as far as Norham Castle, which is ten miles from Berwick, and a boat of thirty tons, can go up the river six miles, with loading.

In the next parish, farther up the river, the fishery is still pretty considerable, being let at from 50l. to 100l. per annum.

These fisheries, being all the property of the Berwick fishmongers or merchants, are of no use to the inhabitants; a single fish can only be purchased at the Billingsgate price, they being all sent to the London and foreign markets. The Tweed is open for fishing from the 10th of January to the 10th of October. The gentlemen concerned in these fisheries, have of late paid great attention to its prosperity; they hold frequent meetings for the purpose, and strictly enforce the laws against delinquents, thereby guarding the fisheries from every encroachment in the close time.

In the Whitater also, salmon run up more than twenty miles, but are in no place to be found here in such numbers as to constitute a regular fishery: no part of the river is rented as such. Trout, and whitling (a large kind of trout, size eighteen inches to two feet in length, and reckoned delicate eating), abound here in the spring months.

Meetings have been held lately, by the gentlemen of Merse and Tiviotdale, to deliberate concerning the practicability and expediency of rendering the Tweed navigable, or of cutting a canal through those two counties to the sea. Meetings have also been held by the gentlemen of the Merse, for considering of the expediency and practicability of building a bridge across the Tweed, near New Waterford, or somewhere between the bridges of Berwick and Coldstream.

Conclusion.—The melioration of the county roads, so long wished for, is now obtained. If to these were joined, a bridge across the Tweed, and a navigable canal to Kelso; hence, from the county's own internal resources, a spirit for manufactures would soon be excited: towns and villages would then become crowded, and new ones built: wealth and riches would then flow upon the banks of the Tweed.

FINIS